

Chapter 1 : HelpKidzLearn: ChooseIt! Maker 3 - Learning to Choose, Choosing to Learn.

*Learning to Choose, Choosing to Learn: The Key to Student Motivation and Achievement [Mike Anderson] on calendrierdelascience.com *FREE* shipping on qualifying offers. Offering students choices about their learning, says author Mike Anderson, is one of the most powerful ways teachers can boost student learning.*

Reinforcement learning Supervised Learning Supervised learning is the task of inferring a function from labeled training data. By fitting to the labeled training set, we want to find the most optimal model parameters to predict unknown labels on other objects test sets. If the label is a real number, we call the task regression. Source Unsupervised Learning In unsupervised learning, we have less information about objects. In particular, the train set is unlabeled. What is our goal now? Some objects can differ hugely from all clusters, and in this way, we assume these objects to be anomalies. Source Semi-Supervised Learning Semi-supervised learning tasks include both of the problems we described earlier: The method allows us to significantly improve accuracy because we can use unlabeled data in the train set with a small amount of labeled data. RL is an area of machine learning concerned with how software agents ought to take actions in some environment to maximize some notion of cumulative reward. You can perform activities and get rewards from the environment for them. After each action, your behavior is getting more complex and clever, so you are training to behave the most effective way on each step. In biology, this is called adaptation to the natural environment. Linear Regression and Linear Classifier These are probably the simplest algorithms in machine learning. You have features x_1, \dots, x_n of objects matrix A and labels vector b . Your goal is to find the most optimal weights w_1, \dots, w_n and bias for these features according to some loss function; for example, MSE or MAE for a regression problem. In the case of MSE there is a mathematical equation from the least squares method: Despite the simplicity of this algorithm, it works pretty well when you have thousands of features; for example, bag of words or n-grams in text analysis. More complex algorithms suffer from overfitting many features and not huge datasets, while linear regression provides decent quality. Source To prevent overfitting, we often use regularization techniques like lasso and ridge. The idea is to add the sum of modules of weights and the sum of squares of weights, respectively, to our loss function. Read a great tutorial on these algorithms at the end of the article. Logistic regression performs binary classification, so the label outputs are binary. The coefficients w are the weights that the model wants to learn. Since this algorithm calculates the probability of belonging to each class, you should take into account how much the probability differs from 0 or 1 and average it over all objects, as we did with linear regression. Such a loss function is the average of cross-entropies: Allow y to be the right answers: Similarly, in the case when y equals 1. What is great about a logistic regression? Decision Trees Another popular and easy-to-understand algorithm is decision trees. The idea of this algorithm is quite simple. In every node, we choose the best split among all features and all possible split points. Each split is selected in such a way as to maximize some functional. In classification trees, we use cross-entropy and Gini index. In regression trees, we minimize the sum of a squared error between the predictive variable of the target values of the points that fall in that region and the one we assign to it. Source We make this procedure recursively for each node and finish when we meet stopping criteria. They can vary from a minimum number of leafs in a node to tree height. Single trees are used very rarely, but in composition with many others, they build very efficient algorithms such as random forest or gradient tree boosting. This is called a clusterization task. Suppose you want to divide all data objects into k clusters. You need to select random k points from your data and name them centers of clusters. The clusters of other objects are defined by the closest cluster center. Then, centers of the clusters are converted and the process repeats until convergence. This is the clearest clusterization technique but it still has some disadvantages. There is a range of clustering methods with different advantages and disadvantages, which you could learn in recommended reading. Principal component analysis is based on the same idea. This algorithm provides dimensionality reduction. Sometimes you have a wide range of features, probably highly correlated between each other, and models can easily overfit on a huge amount of data. Then, you can apply PCA. Surprisingly, these vectors are eigenvectors of correlation matrix of features from a dataset. The algorithm now is clear: We

calculate the correlation matrix of feature columns and find eigenvectors of this matrix. We take these multidimensional vectors and calculate the projection of all features on them. New features are coordinates from a projection and their number depends on the count of eigenvectors, on which you calculate the projection. Neural Networks I already mentioned neural networks when we talked about logistic regression. There are a lot of different architectures that are valuable in very specific tasks. Nonlinearities are represented by convolutional and pooling layers, capable of capturing the characteristic features of images. One of the most known applications of RNNs is machine translation. Conclusion I hope that you now understand common perceptions of the most used machine learning algorithms and give intuition on how to choose one for your specific problem. Linear regression and linear classifier: Despite an apparent simplicity, they are very useful on a huge amount of features where better algorithms suffer from overfitting. The simplest non-linear classifier with a linear combination of parameters and nonlinear function sigmoid for binary classification. A great choice to reduce the dimensionality of your feature space with minimum loss of information. A new era of machine learning algorithms that can be applied for many tasks, but their training needs huge computational complexity.

Chapter 2 : How to choose to learn English?

Offering students choices about their learning, says author Mike Anderson, is one of the most powerful ways teachers can boost student learning, motivation, and achievement. In his latest book, Anderson offers numerous examples of choice in action, ideas to try with different students, and a step-by-step.

Have you spent time in preschool classrooms? In his wildly popular TED talk, Ken Robinson makes the uncomfortable assertion that schools squash creativity instead of nurturing it. In elementary schools, we train kids to be teacher-pleasers. In middle school, we teach them how to jump through hoops to get grades, and by high school, they have learned how to simply comply to get by. One of the ways we can help students retain their intrinsic motivation and independent thinking or help older students regain it is through offering more choices about their daily learning – an idea I explore thoroughly in my new book, *Learning to Choose, Choosing to Learn: The Key to Student Motivation and Achievement*. This can be as simple as allowing students choose a good place in the room to work or helping them decide whether to work alone or with a partner. It could also be something more complex, like taking on an independent research study as part of a thematic unit. A central idea of this book is that using choice as an instructional strategy involves more than simply giving students choices – we have to teach students how to choose well. How do we do this, you wonder? Use a three-step process for facilitating choice: When offering students choices about their learning for example, two different ways to practice a math skill or three different articles to prepare for a class discussion, give them a bit of time to examine the options and think about which might be a good fit for them. As students are working, support and guide their work. If needed, you might help students refine, change, or reflect on choices they have made. After students finish their work, give them time to reflect on the work they have done and the choices they made. This helps build skills of metacognition and enables students to become better at making choices in the future. Scaffold choices for students, according to their needs and experiences. Consider starting the year off with small, bite-sized choices and then, as students are ready, offer more open-ended or complex choices. Emphasize student ownership of work. We need to help students take more ownership of their learning, which means that we need to own the work a little less.

Chapter 3 : Learning to Choose Choosing to Learn | greatexpectations

The Key to Student Motivation and Achievement By Mike Anderson. Choice as a learning strategy is often misunderstood. We've heard of teachers using choice as a filler after students finish their "real work."

You can use the study guide before or after you have read the book, or as you finish each chapter. The study questions provided are not meant to cover all aspects of the book, but, rather, to address specific ideas that might warrant further reflection. Many of the questions contained in this study guide are ones you can think about on your own or in a small group, but you might consider facilitating a larger group with others who have read or are reading *Learning to Choose, Choosing to Learn*: Do you know students who often appear unmotivated? What are some of their interests and passions? In what parts of their lives do they display motivation? What was going on for you then? What kinds of choices do you already offer students? What have been some of the payoffs? What have been some of the challenges? Write a short essay or letter explaining your philosophy as a teacher. What are your positive beliefs about students and learning? Use the examples on p. Try crafting a bold, short personal articulation of your guiding philosophy as an educator. As you continue to read this book, keep referring back to this philosophy. How do you see it resonating?

Larger-group and whole-staff reflections and activities: Have individuals in the group brainstorm a list of positive philosophical statements, placing each statement on a note card. Next, spread out these cards and find ones that go together. What categories do you see? Find three to five common philosophical statements that resonate with the whole group. Reflect on these as a group. How well does your school live these beliefs? Which are particularly evident, and which are harder to see in daily practice?

Introduction to Section I: The Purpose and Power of Choice

Individual and small-group reflections and activities: Of the four key characteristics of the effective uses of choice, which one seems most important to you? What additional important characteristics would you add to this list?

The Key Benefits of Choice

Individual and small-group reflections and activities: What can be challenging about differentiating learning for students? Think about a time when you, as a learner, have been out of the zone of proximal development—either because an exercise was too easy or too hard. How did it feel? How much did you learn? Consider self-differentiation—the idea that students can find their own "just right" learning opportunities. When have you seen your students self-differentiate their learning? When have you found yourself self-differentiating your own learning? Think of a time when you, as a learner, were so caught up in work that you lost track of time. What made that activity so deeply engaging? Consider the additional benefits of choice beginning on p. Which ones especially ring true for you? Which ones are new for you? Consider the idea that choice is a means to an end, not an end in and of itself. In small groups, create T-charts to explore student engagement. List times when students are most energetic and enthusiastic about learning on one side of the chart and times when they are apathetic on the other. Have each group share their charts and reflect with the whole group. Why might students be most and least engaged during these times? As you explore this chapter, make connections to the benefits of choice outlined in the text, and see if any of these resonate with your list. Use this activity to explore the many additional benefits of choice: Post five different areas in the room for reflection, each with a piece of chart paper and a marker. Assign each area one of the topics discussed in this part of the chapter: If more than five people end up in one area, the group should divide up into smaller groups. Groups spend 10–20 minutes discussing the key ideas in their section, sharing ideas from the text and their own experiences. One person in each group records key ideas on their chart paper. Engage in a brief whole-group reflection to wrap up.

Creating a Safe and Supportive Environment

Individual and small-group reflections and activities: What kind of environment would best help you learn? Specifically, how might an environment of safety, inclusion, and collaboration support your learning? What are some ways you already build relationships with, and between, your students? What are some new ideas you might try? Consider your most vulnerable students—the ones who struggle to connect positively with peers. How might you help them make more positive connections? Which discipline strategies that you use set students up for success and help set a positive tone? Are there any that diminish students through shaming or blaming? Are you interested in exploring your language as a

teacher? Invite a trusted colleague into your class, and give them a few specific things to listen for. Do you interact with all students equally? For a couple of days, keep a simple checklist to keep track of who you have interacted with to see if there are any patterns or trends you should work on. What elements of classroom design are strengths of yours? What could be better? Do you use competition as a strategy in your classroom? If so, how do you make it safe for all students? How could you adjust some competitive activities to make them more collaborative? What are some specific skills of cooperation and collaboration that your students need to learn and practice? Create a simple plan for how you might teach one of those skills in the next few days. List common discipline practices used in your school. Which ones especially support a positive, safe, and supportive school community? Which ones may create schools where students feel anxiety, fear, or resentment? Are there any common discipline practices in your school that need reconsidering? Use the chart on page 35 as a starting point for these reflections. Is it a common practice in your school to ask or require students to bring their own supplies and materials to school? If so, reconsider this. How can you make sure that all students will have access to the same high-quality materials without the embarrassment of having to ask for financial help? Only use this activity if you have a strong, positive, and supportive adult community in your school. Go on a museum walk of your school. Take pictures of only positive! Create a digital slide show so everyone can gather ideas from colleagues. In grade level groups, brainstorm some of the social and emotional skills that your students need in order to cooperate and collaborate effectively. Together, share ideas for ways you can all embed the teaching and practice of these skills into daily lessons and activities. Boosting Student Ownership Individual and small-group reflections and activities: Consider your classroom through the eyes of your students. Would they see themselves in this space? Would they feel like it is made with them in mind? How might you boost their sense of ownership of the room? Create your own "Instead of" "Try This" chart using the ones on pp. Use your own language examples to think about ways of boosting student ownership of work. If you use incentives with student, what are some ways you might move away from them so that students build more intrinsic motivation? Build a brief explanation of why students are learning, practicing, or doing into every lesson or activity. Make sure to use kid-friendly language. Does the way you give feedback to students help them focus on their learning or train them to seek to please you?

Chapter 4 : How to Choose Learning Activities – Mission Bible Class

*Learning to Choose: Electoral Politics in East-Central Europe [Hubert Tworzecki] on calendrierdelascience.com *FREE* shipping on qualifying offers. This is a detailed analytic study of voting behavior and party representation in the Czech Republic, Hungary.*

Written by Hema Gopalakrishnan When you are considering implementing e-learning in your organization, the options before you are self-paced learning or live online training, also known as virtual online training. In self-paced learning, learners are allowed to undertake the course at their own pace, rather than what is determined by the instructor. The idea behind self-paced learning is to give the learner the liberty to choose his pace because each learner is unique and must be given the liberty to choose how he wants to progress through the e-learning course. What is the mode you will choose to impart e-learning to your employees? Both the above mentioned modes have their benefits and drawbacks. But, one abiding factor of self-paced learning is it allows learners the liberty to take the course at their own pace. In this blog, we will look at other factors that make a strong case for self-paced learning.

Convenience Self-paced learning gives learners the convenience of learning anytime and anywhere. This gives them an opportunity to balance work and training. They need not fret on not being able to attend scheduled training programs because of work commitments. With self-paced learning, they can choose their time and whether they want to learn at work or at home. This convenience encourages employees to finish the course, which significantly reduces dropout rates.

No Scheduling Issues While self-paced learning offers convenience to learners, it also eliminates scheduling issues for the organization. Scheduling is an issue when you have to train a large number of people by gathering them at the same time. Scheduling issues, rescheduling, or cancellations do not occur with self-paced learning, as the training manager only needs to launch a training program and set a date for its completion.

Cost-Effectiveness Virtual training involves accrued costs of paying the instructor and for the technology. Self-paced learning does not involve these costs, the only investment is in developing the course. So, it is highly cost-effective.

Fits Different Learning Styles and Needs We know that different people have different learning styles. While some may prefer to go through the content multiple times to understand it, others can grasp the meaning after one reading. Some learners require more time to complete a course, while others may not. When learning and comprehension times vary, quick learners may have to wait for others to complete the course while slow learners will have to struggle to keep pace with others. Self-paced learning will suit all types of learners because everyone learns at their own pace.

Learning Effectiveness Learners tend to learn better when they learn at their own pace. This is because they allocate the learning time based on the difficulty of the study material. This improves the retention of difficult subjects because they will devote more time to it and focus their energies on learning.

Scalability Self-paced learning provides scalability because you can train as many people as you want, with modest incremental costs. Once you have developed the curriculum and training material, which could be your only investment, you can spread the training among as many employees as you choose. Your incremental costs would probably be limited to upgrading the technology for reaching more employees.

Reusability When the training is designed for courses that you will be using again and again think of training on compliance policies or standard training manuals , self-paced learning is a wise choice. Using it for permanent content removes the need to have live facilitators and related scheduling concerns. Self-paced learning has many benefits which make it a sensible choice, but on the flipside there are drawbacks as well. Since learners are on their own in this training, they may lose motivation when they encounter difficult topics or wish for interaction with peers, facilitators or experts in the subject. While designing and implementing self-paced learning , take these issues into account and provide learners access to experts in the subject and peers who can provide better insights. Ensure you provide opportunities for practice and give immediate feedback. This will ensure that your self-paced training initiative is a success.

Chapter 5 : Douglas / Glenrock | Fort Collins Meditation & Modern Buddhism

Learning to Choose, Choosing to Learn. by Mike Anderson. Table of Contents. An ASCD Study Guide for Learning to Choose, Choosing to Learn: The Key to Student Motivation and Achievement.

It depends on what you want to do with the answer. It depends on how the math of the algorithm was translated into instructions for the computer you are using. And it depends on how much time you have. This article walks you through how to use it. Note To download the cheat sheet and follow along with this article, go to Machine learning algorithm cheat sheet for Microsoft Azure Machine Learning Studio. This cheat sheet has a very specific audience in mind: That means that it makes some generalizations and oversimplifications, but it points you in a safe direction. It also means that there are lots of algorithms not listed here. These recommendations are compiled feedback and tips from many data scientists and machine learning experts. Sometimes none of them are a perfect fit. Several data scientists I talked with said that the only sure way to find the very best algorithm is to try all of them. Tip To download and print a diagram that gives an overview of the capabilities of Machine Learning Studio, see Overview diagram of Azure Machine Learning Studio capabilities. Flavors of machine learning Supervised Supervised learning algorithms make predictions based on a set of examples. For instance, historical stock prices can be used to hazard guesses at future prices. Each example used for training is labeled with the value of interest—in this case the stock price. A supervised learning algorithm looks for patterns in those value labels. Supervised learning is a popular and useful type of machine learning. With one exception, all the modules in Azure Machine Learning are supervised learning algorithms. There are several specific types of supervised learning that are represented within Azure Machine Learning: When the data are being used to predict a category, supervised learning is also called classification. When there are more categories, as when predicting the winner of the NCAA March Madness tournament, this problem is known as multi-class classification. When a value is being predicted, as with stock prices, supervised learning is called regression. Sometimes the goal is to identify data points that are simply unusual. In fraud detection, for example, any highly unusual credit card spending patterns are suspect. The approach that anomaly detection takes is to simply learn what normal activity looks like using a history non-fraudulent transactions and identify anything that is significantly different. Unsupervised In unsupervised learning, data points have no labels associated with them. Instead, the goal of an unsupervised learning algorithm is to organize the data in some way or to describe its structure. This can mean grouping it into clusters or finding different ways of looking at complex data so that it appears simpler or more organized. Reinforcement learning In reinforcement learning, the algorithm gets to choose an action in response to each data point. The learning algorithm also receives a reward signal a short time later, indicating how good the decision was. Based on this, the algorithm modifies its strategy in order to achieve the highest reward. Currently there are no reinforcement learning algorithm modules in Azure Machine Learning. It is also a natural fit for Internet of Things applications. Sometimes an approximation is adequate, depending on what you want to use it for. Another advantage of more approximate methods is that they naturally tend to avoid overfitting. Training time The number of minutes or hours necessary to train a model varies a great deal between algorithms. Training time is often closely tied to accuracy—one typically accompanies the other. In addition, some algorithms are more sensitive to the number of data points than others. When time is limited it can drive the choice of algorithm, especially when the data set is large. Linearity Lots of machine learning algorithms make use of linearity. Linear classification algorithms assume that classes can be separated by a straight line or its higher-dimensional analog. These include logistic regression and support vector machines as implemented in Azure Machine Learning. Linear regression algorithms assume that data trends follow a straight line. Non-linear class boundary - relying on a linear classification algorithm would result in low accuracy Data with a nonlinear trend - using a linear regression method would generate much larger errors than necessary Despite their dangers, linear algorithms are very popular as a first line of attack. They tend to be algorithmically simple and fast to train. Number of parameters Parameters are the knobs a data scientist gets to turn when setting up an algorithm. The training time and accuracy of the algorithm can sometimes be quite sensitive to

getting just the right settings. Typically, algorithms with large numbers parameters require the most trial and error to find a good combination. Alternatively, there is a parameter sweeping module block in Azure Machine Learning that automatically tries all parameter combinations at whatever granularity you choose. The upside is that having many parameters typically indicates that an algorithm has greater flexibility. It can often achieve very good accuracy. Provided you can find the right combination of parameter settings. Number of features For certain types of data, the number of features can be very large compared to the number of data points. This is often the case with genetics or textual data. The large number of features can bog down some learning algorithms, making training time unfeasibly long. Support Vector Machines are particularly well suited to this case see below. Special cases Some learning algorithms make particular assumptions about the structure of the data or the desired results. If you can find one that fits your needs, it can give you more useful results, more accurate predictions, or faster training times.

Chapter 6 : How to choose machine learning algorithms | Microsoft Docs

Learning To Choose Happiness. In the last 18 years I lost both my parents, one to cancer, the other to a pulmonary embolism. My Dad died in and my Mom just about 5 ½ years ago and although.

Give support and encouragement Provide knowledgeable feedback Apprenticeships. Apprenticeships give employers the opportunity to shape inexperienced workers to fit existing and future jobs. These programs give young workers the opportunity to learn a trade or profession and earn a modest income. Apprenticeship combines supervised training on the job with classroom instruction in a formal, structured program that can last for a year or more. Drilling is a good way for employees to practice skills. Evacuation drills are effective when training emergency preparedness, for example. Advantages Hands-on training methods are effective for training in new procedures and new equipment. They allow trainers to immediately determine whether a trainee has learned the new skill or procedure. Disadvantages They are not good for large groups if you do not have enough equipment or machines for everyone to use. Apprenticeship can be expensive for companies paying for employees who are being trained on the job and are not yet as productive as regular employees. Computer-Based Training CBT Computer-based training is becoming increasingly prevalent as technology becomes more widespread and easy to use. Though traditional forms of training are not likely to be replaced completely by technological solutions, they will most likely be enhanced by them. Human interaction will always remain a key component of workplace training. Nonetheless, it is a good idea to look more closely at what training technologies have to offer and how they might be used to supplement existing training programs or used when developing new ones. Computer-based training formats vary from the simplest text-only programs to highly sophisticated multimedia programs to virtual reality. Consider the following types: The simplest computer-based training programs offer self-paced training in a text-only format. These programs are similar to print-based, individualized training modules with the addition, in most cases, of interactive features. While simple in format, these programs can be highly effective and present complicated information and concepts in a comprehensible and easily accessible way. A wide variety of off-the-shelf training programs covering a broad range of workplace topics are available on CD-ROM. Programs can also be created by training consultants for the specific needs of the particular organization or individual departments. These training materials are an advanced form of computer-based training. They are much more sophisticated than the original text-only programs. Multimedia tends to be more provocative and challenging and, therefore, more stimulating to the adult mind. Although costs are higher than text-only software, the benefits in terms of employee learning may well be worth it. Multimedia training materials are typically found in DVD format. Virtual reality is three-dimensional and interactive, immersing the trainee in a learning experience. Most virtual reality training programs take the form of simulation, which is a highly effective form of training. It is hands-on experience without the risks of actual performance. Flight simulators, for example, have been used successfully for years to train airline and military pilots in critical flying skills, as well as to prepare them for emergency situations in a safe and forgiving environment. Advantages Computer-based training programs are easy to use. They can often be customized or custom designed. They are good for helping employees develop and practice new skills. They are useful for refresher training. They are applicable to self-directed learning. They can be cost-effective because the same equipment and program can be used by large numbers of employees. Computer-based programs are available 24 hours a day, 7 days a week. No matter which shift an employee works, training is always available. Some programs are interactive, requiring trainees to answer questions, make choices, and experience the consequences of those choices. This interaction generally results in greater comprehension and retention. They are uniform, which makes it possible to standardize training. When computers are used for training, it is possible to track what each employee has learned right on the computer. Most programs have post-tests to determine whether the employee has understood the training. Test scores give trainers statistics for training evaluations. Disadvantages These programs require trainees to be computer literate. They require trainees to have computer access. They are not the best choice for new or one-time training. Trainers need live interaction to ensure new skills or concepts are being communicated.

Trainees need to be able to ask questions and receive feedback. Online or E-Learning In addition to computer-based training, many companies with employees in a variety of locations across the country are relying on other technologies to deliver training. This method is becoming more and more popular as access to the Web becomes more widely available. There are many courses available on the Internet in many different topic areas. These courses provide a hands-on, interactive way for employees to work through training presentations that are similar to CD-ROM or PowerPoint, on their own. Training materials are standardized because all trainees will use the same program. Materials are also easy to update, so your training is always in step with your industry. These methods allow the trainer to be in one location and trainees to be scattered in several locations. Participants are networked into the central location and can usually ask questions of the trainer via the telephone or by a webchat feature. Lectures and demonstrations can be effective using this method. This method is similar to videoconferencing but involves audio only. Participants dial in at the scheduled meeting time and hear speakers present their training. Question and answer sessions are frequently held at the end of sessions in which participants can email questions or call in and talk to a presenter. Web meetings, or webinars. This method contains audio and visual components. Participants dial in to receive live audio training and also follow visual material that appears on their computer screens. Online colleges and universities. This method is also known as distance learning, and many schools now offer certificates or degrees through online programs that require only minimal on-campus residency. This method requires participants to be linked on the same network. It can be used with coaches and trainees to teach writing reports and technical documents. You can use e-mail to promote or enhance training. Send reminders for upcoming training. Conduct training evaluations through e-mail forms. Advantages Online or e-learning programs are effective for training across multiple locations. They save the company money on travel expenses. They can be a less expensive way to get training from expert industry professionals and consultants from outside the company. They are good for self-directed learning. They can be easy to update with new company policies or procedures, federal regulations, and compliance issues. They offer trainers a growing array of choices for matching training programs to employee knowledge and skill levels. Some employees may not like the impersonal nature of this training. Employees may be too intimidated by the technology or the remoteness of the trainer to ask questions. Lack of computer terminals or insufficient online time may restrict or preclude access to training. Inadequate or outdated hardware devices e. Self-instruction offers limited opportunities to receive context-specific expert advice or timely response to questions

How to Use a Blended Learning Approach

Blended learning is a commonsense concept that results in great learning success. In a nutshell, blended learning means using more than one training method to train on one subject. Here are several good reasons to use a blended learning approach: A University of Tennessee study showed that a blended learning program reduced both the time and the cost of training by more than 50 percent. The same study showed a 10 percent improved result in learning outcomes compared with traditional training. Learning experts believe that a big advantage of blended learning is that it more closely replicates how people actually learn on the job, through experience and interaction with co-workers. This approach works well because the variety of approaches keeps trainers and trainees engaged in training. Blended learning simply makes a lot of sense. Consider the many factors that affect training:

Chapter 7 : neural network - Choosing a learning rate - Data Science Stack Exchange

Choose: When offering students choices about their learning (for example, two different ways to practice a math skill or three different articles to prepare for a class discussion), give them a bit of time to examine the options and think about which might be a good fit for them.

Nothing is our in this world but time – Seneca You should treat the choice of a potential learning method as an investment. Would you ever open a newspaper, close your eyes and just pick some stocks randomly? Spend an hour or two to think it through. It will pay off, I promise. It really makes a difference. Very often 10 minutes of a good learning method might be worth an hour or even more of a crappy method. Imagine what you could do with all that saved time! Of course, pondering over this decision for too long is no good either. Simply evaluate a couple of methods against the guidelines found in this article, choose the right one and move on. I believe in habits and systems. But there is no denying that motivation is a force to be reckoned with. Especially when you take up a new learning project. However, there is one big problem. Motivation is a capricious mistress. One day she is lovely and charming, while the other day she goes berserk and kicks you right in the nuts. Nevertheless, choosing a right strategy will help you notice results of your learning much quicker. And in my experience, there is nothing better to fuel your motivation. Keep on forgetting words? I hope that by now, I have convinced you that choosing the right learning method is not a waste of time. The next thing on the agenda – learning fallacies. The Most Widespread Learning Fallacies There are a lot of people who offer you their advice in good faith, even though they themselves are ill-informed. Here is the list of the most important learning fallacies you may fall subject to. Everybody is convinced that their learning method is great and that the other guys suck confirmation bias , anyone? Absolutely all learning methods work. It comes as a shock, right? Pick any method you want. If you stick to it long enough, you will see some effects. If you just keep plugging away, eventually you will learn what you have set out to do. Even the worst of the worst methods work. I am the best possible example of this. I really do hope that I was fed with a lead spoon as a child. At least I would be able to justify myself just a little bit. I have managed to write away 12 A4 notebooks this way. Pure madness and the hands down the crappiest method I have ever heard of. Yet, I managed to learn English fluently and get all the Cambridge Certificates. I just kept plugging away at it. Many hours per day. You can see learning as rolling a big ball from point A to point B. Your learning methods decide how heavy the ball is and thus how much time it will take to get it to the finish line. It just takes longer to do it and it is more difficult. I got plenty of angry e-mails. Others would gladly spit into my cereal if they got a chance. Thor only knows how many students have been infected with this idea. However, let me repeat for dramatic effect. They prefer to see information visually, orally or in some other way. It means you like it more. An author who enjoys music the most will think that the music is the best way to learn. Another one will try to convince you that spending more time outside is the ultimate solution. But there is some silver lining here. Liking a given method makes it more sustainable. You can use it longer than some other methods without feeling fatigued. It certainly counts for something and you should always have such enjoyable learning methods in your arsenal. It does, however, make it more sustainable. Fallacy 3 – Everybody learns differently Everybody learns differently is just a special case of the snowflake syndrome. I get it, you are without the slightest doubt special in your own way. Let me explain why we are not so special and so different when it comes to learning. We are the product of the evolution. Our brains are in many ways very similar. Your working memory capacity is probably the same as mine. Surpass it and you can say goodbye to remembering things. You learn most of the things better by doing. Your attention is very limited. Your brain needs regular breaks during learning. You learn better when you space your learning. The list goes on and on. So yes, you are special in many ways. But not in the ways your brain acquires knowledge. Main takeaway – our brains absorb information in a very similar way. How the hell is this a learning fallacy? Is it not important for a method to be based on science? Yes, it is crucial. However, there is one problem with that. People love numbers, statistics and quoting research papers. It makes everything more believable. You can come up with any crappy theory and method, back it up with some research paper and people will buy it. There are a lot of

companies which do exactly that. They apply flaky results of some fishy research papers to their learning method and sell it for big bucks. Most of the time the only revolutionary thing about it is spaced repetition. Obviously, spaced repetition algorithms are amazing. You can go ahead and just download ANKI for free. I can guarantee you that almost every method is based on some research paper. Whether its creator knows it or not. Fallacy 5 "There is one method There is no perfect learning method. You need other tools as well. Learning is too complicated to approach it from only one side. Main takeaway " there is no perfect method. You should always have at least a couple of them in order to learn effectively. Instead, I will show you which criteria you can use to evaluate the general effectiveness of different methods. The man who grasps principles can successfully select his own methods. Once you master this basic information it will be much easier for you to assess different learning methods. But remember " first, do the real work and then have fun. I get requests to consult or collaborate on some language course all the time. There has been just one exception to this day. Want to switch to another method? Test them against each other. A good method should always provide you with some amount of feedback. Final Words Choosing the best learning methods is definitely not easy. It might take some time and experience in order to tell the chaff from the wheat. Nevertheless, it is always worth the effort.

Chapter 8 : The Most Effective Training Techniques - TrainingToday: Online Employee Training

How do you know when to use "what" or "which"? It's easy! In this English grammar lesson, you'll learn which of these question words is more specific and limited and which is more general and wide.

Azure Machine Learning Studio has a large library of algorithms from the regression, classification, clustering, and anomaly detection families. Each is designed to address a different type of machine learning problem. Machine learning algorithm cheat sheet Download and print the Machine Learning Studio Algorithm Cheat Sheet in tabloid size to keep it handy and get help choosing an algorithm. Notes and terminology definitions for the Machine Learning Studio algorithm cheat sheet The suggestions offered in this algorithm cheat sheet are approximate rules-of-thumb. Some can be bent, and some can be flagrantly violated. This is intended to suggest a starting point. There is simply no substitute for understanding the principles of each algorithm and understanding the system that generated your data. Every machine learning algorithm has its own style or inductive bias. For a specific problem, several algorithms may be appropriate and one algorithm may be a better fit than others. In cases like these, several algorithms are listed together in the cheat sheet. An appropriate strategy would be to try one algorithm, and if the results are not yet satisfactory, try the others. There are three main categories of machine learning: In supervised learning, each data point is labeled or associated with a category or value of interest. An example of a value label is the sale price associated with a used car. The goal of supervised learning is to study many labeled examples like these, and then to be able to make predictions about future data points. For example, identifying new photos with the correct animal or assigning accurate sale prices to other used cars. This is a popular and useful type of machine learning. In unsupervised learning, data points have no labels associated with them. Instead, the goal of an unsupervised learning algorithm is to organize the data in some way or to describe its structure. This can mean grouping it into clusters, as K-means does, or finding different ways of looking at complex data so that it appears simpler. In reinforcement learning, the algorithm gets to choose an action in response to each data point. The learning algorithm also receives a reward signal a short time later, indicating how good the decision was. Based on this, the algorithm modifies its strategy in order to achieve the highest reward. Currently there are no reinforcement learning algorithm modules in Azure ML. Bayesian methods make the assumption of statistically independent data points. For example, if the data being recorded is the number of minutes until the next subway train arrives, two measurements taken a day apart are statistically independent. However, two measurements taken a minute apart are not statistically independent - the value of one is highly predictive of the value of the other. Boosted decision tree regression takes advantage of feature overlap or interaction among features. That means that, in any given data point, the value of one feature is somewhat predictive of the value of another. The information contained in the two features is somewhat redundant. Classifying data into more than two categories can be done by either using an inherently multi-class classifier, or by combining a set of two-class classifiers into an ensemble. In the ensemble approach, there is a separate two-class classifier for each class - each one separates the data into two categories: This is the operational principle behind One-vs-All Multiclass. Several methods, including logistic regression and the Bayes point machine, assume linear class boundaries. That is, they assume that the boundaries between classes are approximately straight lines or hyperplanes in the more general case. If the class boundaries look very irregular, stick with decision trees, decision jungles, support vector machines, or neural networks. Next steps For a downloadable infographic that describes algorithms and provides examples, see Downloadable Infographic: Machine learning basics with algorithm examples. To download and print a diagram that gives an overview of the capabilities of Machine Learning Studio, see Overview diagram of Azure Machine Learning Studio capabilities. Note You can try Azure Machine Learning for free. No credit card or Azure subscription is required.

Chapter 9 : ASCD Book: Learning to Choose, Choosing to Learn: The Key to Student Motivation and Achievement

The Microsoft Azure Machine Learning Algorithm Cheat Sheet helps you choose the right machine learning algorithm for

DOWNLOAD PDF LEARNING TO CHOOSE

your predictive analytics solutions from the Azure Machine Learning Studio library of algorithms. This article walks you through how to use it.