Chapter 1 : Table of Contents Â· Crafting Interpreters

INTRODUCTION: EMBEDDED calendrierdelascience.com download Free Machine generated contents note: 1. INTRODUCTION: EMBEDDED TRUST TXT 1. 1 Purpose of the Web Service Architecture. Web services provide a standard means of interoperating between different software applications, running on a variety of platforms and/or frameworks.

Export and then import the virtual machine of the source domain controller Prerequisites To complete the steps in the following procedures, you must be a member of the Domain Admins group or have the equivalent permissions assigned to it. The Windows PowerShell commands used in this guide must be run from an elevated command prompt. To do this, right click the Windows PowerShell icon, and then click Run as administrator. Note If you are using another hypervisor, you should contact the vendor of that hypervisor to verify if the hypervisor supports VM-Generation ID. To increase the availability of the AD DS service, this guide recommends and provides instructions using two different Hyper-V hosts, which helps prevent a potentially single point of failure. However, you do not need two Hyper-V hosts to perform virtual domain controller cloning. In order to successfully import and export a VHD file using Hyper-V, the virtual network switches on both Hyper-V hosts should have the same name. If the two Hyper-V hosts HyperV1 and HyperV2 have different processors, shut down the virtual machine VirtualDC1 that you plan to export, right-click the VM, click Settings, click Processor, and under Processor compatibility select Migrate to a physical computer with a different processor version and click OK. If necessary, you can transfer the PDC emulator role to a domain controller that runs Windows Server For more information, see Using Ntdsutil. This will be the source domain controller used for cloning. Note For cloning to succeed, the source domain controller that is used to create the clone cannot be from a DC that has been demoted since the source VHD media was created. You should not clone a VHD or restore a snapshot that is older than the tombstone lifetime value or the deleted object lifetime value if Active Directory Recycle Bin is enabled. If you are copying a VHD of an existing domain controller, be sure the VHD file is not older that the tombstone lifetime value by default, 60 days. You should not copy a VHD of a running domain controller to create clone media. This can cause a sharing problem when trying to import the new VM. The source Windows Server domain controller used for cloning should be in a healthy state. To determine the state of the source domain controller run dcdiag. If they are not specified, the cloned domain controller will point to itself as Preferred DNS server by default. The cloned domain controller will not have a DNS delegation. The following server roles are not supported for cloning: Grant the source virtualized domain controller the permission to be cloned In this procedure, you grant the source domain controller the permission to be cloned by using Active Directory Administrative Center to add the source domain controller to the Cloneable Domain Controllers group. To grant the source virtualized domain controller the permission to be cloned On any domain controller in the same domain as the domain controller being prepared for cloning VirtualDC1 , open Active Directory Administrative Center ADAC , locate the virtualized domain controller object domain controllers are usually located under the Domain Controllers container in ADAC , right click it, choose Add to group and under Enter the object name to select type Cloneable Domain Controllers and then click OK. The group membership update performed in this step must replicate to PDC emulator before cloning can be performed. If the Cloneable Domain Controllers group is not found, the PDC emulator role might not be hosted on a domain controller that runs Windows Server To identify applications or services that run on a source domain controller which have not been evaluated for cloning On the source domain controller VirtualDC1 , click Server Manager, click Tools, click Active Directory Module for Windows PowerShell and then type the following command: Get-ADDCCloningExcludedApplicationList Vet the list of the returned services and installed programs with the software vendor to determine whether they can be safely cloned. If applications or services in the list cannot be safely cloned, you must remove them from the source domain controller or cloning will fail. For the

set of services and installed programs that were determined to be safely cloned, run the command again with the "GenerateXML switch to provision these services and programs in the CustomDCCloneAllowList. It is recommended that you specify a suitable site in the DCCloneConfig. The computer name is optional. If you do not specify one, a unique name will be generated based on the following algorithm: The prefix is the first 8 characters of the source domain controller computer name. For example, a source computer name of SourceComputer is truncated to a prefix string of SourceCo. A unique naming suffix of the format ""CLnnnn" is appended to the prefix string where nnnn is the next available value from that the PDC determines is not currently in use. For example, if is the next available number in the allowed range, using the preceding example of the computer name prefix SourceCo, the derived name to use for the clone computer will be set as SourceCo-CL The GC does not need to be the same domain controller as the PDC emulator, but preferably it should be in the same site. If a GC is not available, the command fails with the error "The server is not operational. If you specify only of those arguments, cloning fails with error code 0x appearing in the dcpromo. To create a clone domain controller named Clone2 with dynamic IPv4 settings, type: This can be more efficient than individually preparing each VM, for example, by importing each copy. You should first run the cmdlet locally on the source media to ensure that prerequisite checks pass. The prerequisite checks are not performed in offline mode because the cmdlet could be run from a machine that may not be from the same domain or from a domain-joined computer. After you run the cmdlet locally, it will create a DCCloneConfig. You may delete the DCCloneConfig. Export and then import the virtual machine of the source domain controller In this procedure, export the virtual machine of the source virtualized domain controller and then import the virtual machine. This action creates a clone virtualized domain controller in your domain. You need to be a member of the local Administrators group on each Hyper-V host. If you use different credentials for each server, run the Windows PowerShell cmdlets to export and import the VM in different Windows PowerShell sessions. If there are snapshots on the source domain controller, they should be deleted before the source domain controller is exported because the VM will not import if a snapshot has processor settings that are incompatible with the target hyper-v host. If the processor settings are compatible between the source and target hyper-v hosts, you may export and copy the source without deleting snapshots beforehand. After import, however, the snapshots must be deleted from the clone VM before it starts. To copy a virtual domain controller by exporting and then importing the virtualized source domain controller On HyperV1, shutdown the source domain controller VirtualDC1. Note You should delete all the associated snapshots because each time a snapshot is taken, a new AVHD file is created that acts as differencing disk. This creates a chain affect. Use the Copy the virtual machine create new unique ID option when importing the virtual machine. You should not deploy more than the recommended number of clone domain controllers simultaneously unless you have thoroughly tested that number for your environment. If it was shutdown, make sure it has started and performed initial synchronization so it is aware that is holds the PDC emulator role. For more information, see Microsoft KB article After cloning completes, verify the name of the clone computer to ensure the cloning operation succeeded. If you try to log on and receive an error indicating no logon servers are available, try logging on in DSRM. The cloned domain controller will be a member of the Cloneable Domain Controllers group because it copies the membership from the source domain controller. As a best practice, you should leave the Cloneable Domain Controllers group empty until you are ready to perform cloning operations, and you should remove members after cloning operations are complete. If the source domain controller stores a backup media, the cloned domain controller will also store the backup media. You can run wbadmin get versions to show the backup media on the cloned domain controller. A member of the Domain Admins group should delete the backup media on the cloned domain controller to prevent it from being accidentally restored. For more information about how to delete a system state backup using wbadmin. To log on to a domain controller that is started in DSRM, use. Correct the cause for cloning failure and verify that the dcpromo. If cloning cannot be re-tried, safely discard the media. If cloning can be re-tried, you must remove the DS Restore Mode boot flag in order to try cloning again. Open Windows Server with an elevated command right

click Windows Server and choose Run as Administrator , and then type msconfig. On the Boot tab, under Boot Options, clear Safe boot it is already selected with the option Active Directory repair enabled. Click OK and restart when prompted. For more troubleshooting information about virtualized domain controllers, see Virtualized Domain Controller Troubleshooting.

Chapter 2 : JOSSO 2 - Processing

Moving to the cloud: developing apps in the new world of cloud computing. - Machine generated contents note: Chapter 1: Introduction Chapter 2: Infrastructure as a Service Chapter 3: Platform as a Service Chapter 4: Application as a Service Chapter 5: Paradigms for Developing Cloud Applications Chapter 6: Addressing the Cloud Challenges Chapter 7: Security Chapter 8: Managing the Cloud.

A function can be expressed in graph form. The function is represented by a curve drawn on a cartesian plane. The domain is plotted horizontally in the x direction and the range is plotted vertically in the y direction. To find the range value y corresponding to a given domain value x you start at the domain value on the x axis, go vertically until you reach the graph, then go horizontally until you reach the y axis. Here is an example of a function in graph form: Click here to see the graphs of a variety of function types. A function can be expressed in formula form. The formula is used to calculate the range value for any given domain value. Here is an example of a function in formula form: Here is an example showing how the formula is used to calculate a value of the range for a value of the domain, say 4. The domain value 4 is substituted in for x wherever x occurs and then the formula is simplified to yield the range value: Here is another example with the domain value 5: Another way to write the above function is this: Variable y is the value of the range that corresponds to the value of variable x of the domain. Variable y is called the dependent variable and variable x is called the independent variable. This form plays down the function aspect of the relationship and just gives an equation connecting values of the domain and range. Yet another way to write the function is in two parts, like this: The first part gives a name to the function and the second part gives the formula for the function. The argument and value of a function The value of the domain that goes into the function machine is also called the argument of the function and the value of the range that comes out of the function machine is also called the value of the function. Then we say that the argument of the function f is 5 and the value of f is If a function is expressed in list or graph form you can identify the domain and range by simply looking at the list or graph. But if the function is expressed in formula form then you must do the following: If they do then they are not in the domain. Once the domain is known, you can find the range by substituting various domain value into the formula. The domain must be because otherwise we are trying to take the square root of a negative number. Then if we substitute various values of the domain into the formula, we see that the range is. Here is a graph of this function which corroborates our findings: The vertical line test for a function The definition of function states that for each member of the domain there can be only one member of the range. Thus the graph of a function cannot look like this: If the graph does not pass this so-called vertical line test then it is not the graph of a function. Instead we say that it is the graph of a relation between x and y. One-to-one and many-to-one functions A function is said to be one-to-one if every y value has exactly one x value mapped onto it, and many-to-one if there are y values that have more than one x value mapped onto them. This graph shows a many-to-one function. The three dots indicate three x values that are all mapped onto the same y value. If it could, that inverse would be one-to-many and this would violate the definition of a function. Substituting expressions into functions Often, especially in calculus, we use the formula form of a function and we let the argument be an expression instead of just a number. The only complication in this case is that we must usually put brackets around the argument to preserve the proper order of operations. This is because the formula is just a recipe for what to do to the input the argument to get the output the function value. For example the functional notation: Thus the following are all valid substitutions: On the left side of each example the brackets indicate functional notation. We are not multiplying f by whatever! On the right side we are using brackets to preserve the order of operations. Algebra Coach Exercises Composition of functions Just as we can substitute an expression into a function, so we can substitute another function into a function. For example in the previous section we defined the function: We can also switch the order and substitute f into g, like this: Notice that the result is completely different. If we think of f and g as machines, then substituting f into g

means that the output of f is the input of g, as shown here: The composition of functions is important because this method can be used to create complicated functions out of simple components. Algebra Coach Exercises Inverse of a function Suppose that a function f maps x onto y and that another function g maps y back onto the original x as shown here: Then function g is called the inverse function of function f and the composition of f and g has no overall effect. Note that function f must be one-to-one for it to have an inverse. One way to derive the inverse function g for any function f is this: Set f x equal to y. In the equation just found, rename x to be g y. Set f x equal to y Solve for x Rename x as g y. This is the inverse. Notice that function f takes its argument, multiplies it by 2 and then adds 3. The inverse function, g, does exactly the opposite steps in the opposite order. It takes its argument, first subtracts 3 and then divides by 2. This is exactly what you would expect the inverse to do. Set f x equal to y Solve for x. Notice that f maps two points onto every point. But this violates the definition of a function so there is no inverse.

Chapter 3 : TABLE OF CONTENT

Entity is a class of real world thing whose role of interaction with the enterprise is well-defined. Each entity has a unique name which should reflect the role that is played by that type of object. These things may be physical objects abstract concepts. Each entity must be distinct from but fulfill the same role as other occurrence of the entity. Instructor in ERD defines entity. On diagram, each relationship is shown linked by lines to entities to which it refers. Each relationship frame that includes the entities involved and other text forming a complete sentence. Yourdon system methods, model driven methods, Each occurrence of relationship corresponds to a specific occurrence of a "Course" and a specific occurrence of "Topic". A relationship that refers to two entity occurrences is called binary relationship. A relationship involving more than 2 entity occurrences is referred to as higher order relationship. When entity is repeated in relationship,the relationship is referred to as being recursive. For recursive relationships, the role for the entities must distinguished as it can be seen in the frame that employee reports to other employee who is manager. If the occurrence of entities in a recursive frame is not significant the relationship is known as symmetric. The relationship " is friend of" is an example of symmetric relationship. This is the entity which acts as entity and relationship both. As a relationship it indicates a group of real world associations between entities. Attributes of associative entity do not describe the entities that participate in relationship but the occurrence of relationship between them. Each occurrence of "marriage" records the fact that specific man was married to a specific woman on a specific date. Subtype, Subtyping and Supertyping: Subtype of entity is a well defined group of occurrences of entity that may be regarded as entity in its own right. Subtyping indicates that the enterprise regards the entity as being made up of number of distinct identifiable groups each of which is referred to as a subtype. In STD, each state represents a period of time during which the system exhibits some observable behavior. Components of STDs Access: Access on STD shows the possible access to the occurrence of entity when change of state occurs. Where it is difficult to draw diagrams without crossing transaction lines a pair of connector symbols may be used. On diagram connector "op"is used in this way. Example shown is for associative entity "scheduled course". An entity may have several STD one for each of its state variable. The responsibility whether or not it does occur resides in a data process. A transition to this initial state is referred to as an initial transition and must always include "create". Each occurrence of the entity have a well defined state for a given state variable. Each schedule course may have a status of "open","running", "full" or finished". Purpose of context diagram is to depict how the system is connected to,interacts with other entities which makes its data environment. Context diagram show all external entities which interact with the system and all data flows between these and the system. Components of Context Diagrams: Access toa store that takes place at a particular instant of time. Data is present in store and can be accessed anytime. This is a process group which represent the system. On context diagram system is regarded as a "Black Box". All requirements for behavior or data storage by the system is considered to be within this process. Dialogue event flow is used to show a group of input flows ,together with corresponding response flows either initiated by terminator or the system. The store indicates that the system and terminator are decoupled in the sense that one can change values in the store independently of the other. A data flow diagram is the most important technique for modeling high level detail of the process within a system. These highlights the functions of the system and how they use stored information and transfer information between each other. They show how input data is transformed to outputs results through sequence of functional transformations. An access flow from a store show that the process uses information held in the store. This may correspond to: The process checks whether an entity or relationship occurrence matching a particular criterion exists. The

process uses the values of one or more attributes for a selected occurrence of the entity. The value of a state variable needs to be checked. An access flow going to a store shows that the process will alter information held in the store, This may correspond to a: In some situations it is necessary to continuously monitor the value in the store. This is carried out using data process. Link between this data process and the store is shown as continuous access flow. Control process coordinate the activation of processes and signal to other components of system essential model. The coordination is carried out by interpreting and generating event flows and controlling processes by triggering or enabling or disabling them. In figure control process "control car oxidation" shows that control logic must be present to coordinate the monitoring, changing and replacing of solutions. It also derives the movement of the car body by interpreting the state of the oxidation bath and generating required signals such as "move car signal" to move the car body. Continuous event flows represent a situation or status that is either true or not. On a data flow diagram the source of the data flow may be: Data Flow that persists over a period of time is called as continuous data flow. The value is present over a period of time and may change during that time. The figure shows a continuous data flow "solution strength" used by the process "monitor solution strength". Solution strength is the present strength of solution which is continuously present. At lowest level there can be two data flows in direct relation to each other, one causes the other to occur. Comments may be used to highlight any aliases,ties to previous or anticipated implementation. The context diagram is treated as a DFD with one process group. Data flow diagram number DFD Number A data flow diagram has the same number as the process group it describes in more detail. The child diagram of the context diagram is numbered "0". A data process is a process that solely transforms data. Data processes may be continuous or descrete. A continuous data process may generate continuous or discrete event flows. A discrete data process cannot generate continuous event flows. Stores act as buffers between processes that are active at different times. A data store holds the data at rest. In the figure the data store " solutions" is a collection of entity occurrence of all possible solutions used in the bathing of car bodies. Dialogue event flow is a packing of several event flows between two processes or between a process and a terminator. A discrete access flow is an access to a store that takes place under the control of the system at a particular instant of time. In figure the process "Check solution is correct " accesses the store "solution in tank" to insure that the solution is correct for the car that is about to be bathed. A discrete data flow is transient and must be processed at the moment it occurs. In the figure "solution change", generated by "change to new solution" represents the need to tell the operators that they must change to a certain solution. This is an example of discrete data flow. If a control process detecting the discrete flow is not active at the time it occurs, the event flow will be lost. This represents a process being enabled and disabled from a control process. A process that is enabled will run whenever its stimulus occurs or run continuously until disabled. An event flow represents the occurrence of an event discrete , or the state of something Continuous. An event store is a mechanism for storing events relating to resources until they can be used by a control process. When an event detector signals an event store rather than use a discrete event flow , it can respond ,or until the store is reinitialized. A process is a system function. It is either a data process , a control process , or a process group. It may be either continuous or discrete. A process group represents a group of processes as a single icon on the diagram. Process group are used to reduce the complexity of any one data flow diagram by combining related functions and naming the combinations for the general function that this group carries out. In the figure "change to new solution" is a process group comprising processes "control solution change","determine new solution","detect empty tank", etc. A process group is drawn on the diagram as a solid circle, it cannot be visually distinguished from a data process without looking at its specification. A prompt labeled "T" represents a trigger. In figure "check solution is correct " is triggered , as it will run in "zero time" and immediately reply with one of the two event flows "correct solution" or "incorrect solution". DFD method is an object oriented method that allows to design systems using objects.

Chapter 4 : Machine translation - Wikipedia

What is the Up: 1 Introduction Previous: 1 Introduction Contents What is a Compiler? A compiler is a program that translates a source program written in some high-level programming language (such as Java) into machine code for some computer architecture (such as the Intel Pentium architecture).

Statistical machine translation Statistical machine translation tries to generate translations using statistical methods based on bilingual text corpora, such as the Canadian Hansard corpus, the English-French record of the Canadian parliament and EUROPARL , the record of the European Parliament. Where such corpora are available, good results can be achieved translating similar texts, but such corpora are still rare for many language pairs. Generally, the more human-translated documents available in a given language, the more likely it is that the translation will be of good quality. With further development, this may allow statistical machine translation to operate off of a monolingual text corpus. In this approach, the corpus that is used is one that contains texts that have already been translated. Given a sentence that is to be translated, sentences from this corpus are selected that contain similar sub-sentential components. Hybrid machine translation Hybrid machine translation HMT leverages the strengths of statistical and rule-based translation methodologies. The approaches differ in a number of ways: Rules post-processed by statistics: Translations are performed using a rules based engine. Statistics guided by rules: Rules are used to pre-process data in an attempt to better guide the statistical engine. Rules are also used to post-process the statistical output to perform functions such as normalization. This approach has a lot more power, flexibility and control when translating. It also provides extensive control over the way in which the content is processed during both pre-translation e. More recently, with the advent of Neural MT, a new version of hybrid machine translation is emerging that combines the benefits of rules, statistical and neural machine translation. The approach allows benefitting from pre- and post-processing in a rule guided workflow as well as benefitting from NMT and SMT. The downside is the inherent complexity which makes the approach suitable only for specific use cases. One of the proponents of this approach for complex use cases is Omniscien Technologies. Neural machine translation A deep learning based approach to MT, neural machine translation has made rapid progress in recent years, and Google has announced its translation services are now using this technology in preference to its previous statistical methods. Tilde is also providing translation solutions based in neural networks. The broken Chinese sentence sounds like "there does not exist an entry" or "have not entered yet" Main articles: Word sense disambiguation and Syntactic disambiguation Word-sense disambiguation concerns finding a suitable translation when a word can have more than one meaning. The problem was first raised in the s by Yehoshua Bar-Hillel. They can be approximately divided into "shallow" approaches and "deep" approaches. Shallow approaches assume no knowledge of the text. They simply apply statistical methods to the words surrounding the ambiguous word. Deep approaches presume a comprehensive knowledge of the word. So far, shallow approaches have been more successful. Why does a translator need a whole workday to translate five pages, and not an hour or two? There are ambiguities one has to resolve. For instance, the author of the source text, an Australian physician, cited the example of an epidemic which was declared during World War II in a "Japanese prisoner of war camp". Was he talking about an American camp with Japanese prisoners or a Japanese camp with American prisoners? The English has two senses. A shallow approach which simply guessed at the sense of the ambiguous English phrase that Piron mentions based, perhaps, on which kind of prisoner-of-war camp is more often mentioned in a given corpus would have a reasonable chance of guessing wrong fairly often. Non-standard speech[edit] One of the major pitfalls of MT is its inability to translate non-standard language with the same accuracy as standard language. Heuristic or statistical based MT takes input from various sources in standard form of a language. Rule-based translation, by nature, does not include common non-standard usages. This causes errors in translation from a vernacular source or into colloquial language. Limitations on translation from casual speech present issues in the use of machine translation in mobile

devices. Related to named entity recognition in information extraction. Name entities, in narrow sense, refer to concrete or abstract entities in the real world including people, organizations, companies, places etc. The initial difficulty that arises in dealing with named entities is simply identifying them in the text. Consider the list of names common in a particular language to illustrate this â€" the most common names are different for each language and also are constantly changing. Another way to deal with named entities is to use transliteration instead of translation, meaning that you find the letters in the target language that most closely correspond to the name in the source language. There have been attempts to incorporate this into machine translation by adding a transliteration step into the translation procedure. However, these attempts still have their problems and have even been cited as worsening the quality of translation. For example, for "Southern California" the first word should be translated directly, while the second word should be transliterated. However, machines would often transliterate both because they treated them as one entity. Words like these are hard for machine translators, even those with a transliteration component, to process. The lack of attention to the issue of named entity translation has been recognized as potentially stemming from a lack of resources to devote to the task in addition to the complexity of creating a good system for named entity translation. One approach to named entity translation has been to transliterate, and not translate, those words. A second is to create a "do-not-translate" list, which has the same end goal â€" transliteration as opposed to translation. A third approach to successful named entity translation is a class-based model. In this method, named entities are replaced with a token to represent the class they belong to. For example, "Ted" and "Erica" would both be replaced with "person" class token. In this way the statistical distribution and use of person names in general can be analyzed instead of looking at the distributions of "Ted" and "Erica" individually. A problem that the class based model solves is that the probability of a given name in a specific language will not affect the assigned probability of a translation. A study by Stanford on improving this area of translation gives the examples that different probabilities will be assigned to "David is going for a walk" and "Ankit is going for a walk" for English as a target language due to the different number of occurrences for each name in the training data. A frustrating outcome of the same study by Stanford and other attempts to improve named recognition translation is that many times, a decrease in the BLEU scores for translation will result from the inclusion of methods for named entity translation. Using these methods, a text that has been translated into 2 or more languages may be utilized in combination to provide a more accurate translation into a third language compared with if just one of those source languages were used alone. If the stored information is of linguistic nature, one can speak of a lexicon. With access to a large knowledge base, systems can be enabled to resolve many especially lexical ambiguities on their own. In the following classic examples, as humans, we are able to interpret the prepositional phrase according to the context because we use our world knowledge, stored in our lexicons: With a large enough ontology as a source of knowledge however, the possible interpretations of ambiguous words in a specific context can be reduced. Other areas of usage for ontologies within NLP include information retrieval , information extraction and text summarization. Because of its size, it had to be created automatically. A definition match algorithm was created to automatically merge the correct meanings of ambiguous words between the two online resources, based on the words that the definitions of those meanings have in common in LDOCE and WordNet. Using a similarity matrix , the algorithm delivered matches between meanings including a confidence factor. This algorithm alone, however, did not match all meanings correctly on its own. A second hierarchy match algorithm was therefore created which uses the taxonomic hierarchies found in WordNet deep hierarchies and partially in LDOCE flat hierarchies. This works by first matching unambiguous meanings, then limiting the search space to only the respective ancestors and descendants of those matched meanings. Thus, the algorithm matched locally unambiguous meanings for instance, while the word seal as such is ambiguous, there is only one meaning of "seal" in the animal subhierarchy. Both algorithms complemented each other and helped constructing a large-scale ontology for the machine translation system. Applications[edit] While no system provides the holy grail of fully automatic high-quality machine translation of unrestricted text, many fully automated systems produce reasonable

output. Probably the largest institutional user is the European Commission. In-Q-Tel [49] a venture capital fund, largely funded by the US Intelligence Community, to stimulate new technologies through private sector entrepreneurs brought up companies like Language Weaver. Currently the military community is interested in translation and processing of languages like Arabic , Pashto , and Dari. Machine translation applications have also been released for most mobile devices, including mobile telephones, pocket PCs, PDAs, etc. Due to their portability, such instruments have come to be designated as mobile translation tools enabling mobile business networking between partners speaking different languages, or facilitating both foreign language learning and unaccompanied traveling to foreign countries without the need of the intermediation of a human translator. Despite being labelled as an unworthy competitor to human translation in by the Automated Language Processing Advisory Committee put together by the United States government, [52] the quality of machine translation has now been improved to such levels that its application in online collaboration and in the medical field are being investigated. The application of this technology in medical settings where human translators are absent is another topic of research, but difficulties arise due to the importance of accurate translations in medical diagnoses. Evaluation of machine translation There are many factors that affect how machine translation systems are evaluated. These factors include the intended use of the translation, the nature of the machine translation software, and the nature of the translation process. Different programs may work well for different purposes. In certain applications, however, e. Even though human evaluation is time-consuming, it is still the most reliable method to compare different systems such as rule-based and statistical systems. It is certainly true that even purely human-generated translations are prone to error. Therefore, to ensure that a machine-generated translation will be useful to a human being and that publishable-quality translation is achieved, such translations must be reviewed and edited by a human. Such research is a necessary prelude to the pre-editing necessary in order to provide input for machine-translation software such that the output will not be meaningless. Both example-based and statistical machine translation rely on a vast array of real example sentences as a base for translation, and when too many or too few sentences are analyzed accuracy is jeopardized. Researchers found that when a program is trained on , sentence pairings, accuracy actually decreases. Ana Nino of the University of Manchester has researched some of the advantages in utilizing machine translation in the classroom. One such pedagogical method is called using "MT as a Bad Model. Nino cites that this teaching tool was implemented in the late s. At the end of various semesters, Dr. Nino was able to obtain survey results from students who had used MT as a Bad Model as well as other models. Overwhelmingly, students felt that they had observed improved comprehension, lexical retrieval, and increased confidence in their target language. Machine translation of sign languages In the early s, options for machine translation between spoken and signed languages were severely limited.

Chapter 5 : Table of contents for The centrality of religion in social life

Machine Learning Classi er In our study, we used Support Vector Machine (SVM) [15] with Linear Kernel which is the recommended algorithm for text classi cation on high dimensional.

Building wind turbines costs more energy than you think.. Fred Udo Monnickendam, March 12 Presently enormous investments are done in Europe to add wind turbines to the existing electricity production and distribution system and even larger sums are spent on operation subsidies. In the context of this efforts it is important to note, that the existing system based on fossil fuels and nuclear energy has been operating perfectly for many decades without the addition of wind energy. The arguments to add wind energy are well known and are summarised by the slogan: It is conveniently ignored, that the energy intensive manufacturing industry does not accept to pay electricity bills that are a good factor higher than the bills of their competitors overseas. Worse is, that no further analysis is done by the responsible authorities to clarify the system effects of non-dispatchable electricity, as wind power is only available when the wind blows sufficiently strongly. Electricity cannot be stored in sufficient quantities to bridge periods without wind, so the existing system has to be maintained in full. This implies, that the sole justification for building an immensely expensive system ruining our rural landscape is the saving of fossil fuel and the reduction of CO_2 emissions. The credibility of this effort is proportional to the amount of fossil fuel saved by operating this wind turbines. This is the reason why results showing adverse effects of wind energy on the operation of generators and the distribution grid are vehemently denied by the wind lobby. The difficulties of the grid in Germany illustrate this point. Proponents of wind-energy invariably quote the time to generate the energy necessary to build a turbine to be around 6 months, but calculations from a Dutch building firm arrive at numbers three times that value. Here again the credibility of wind-energy is at stake. The initial energy spent on the building of a wind farm counts as a loss of energy produced. This is not true for the components of the classical system, because they are essential for the functioning of our society, while wind-energy is just an extra to dress our politicians in green. Calculating the energy necessary to build wind turbines. Calculation based on CO_2 emissions. A report from the university of Sydney on investments in nuclear energy contains also an analysis of the payback time of various techniques of electricity generation. The following is a discussion of their results for wind-energy. From these numbers the authors calculate the total CO_2 emissions caused by the construction and building of the turbine. This amount is divided by the total energy generated by the turbines during its lifetime to arrive at the CO_2 emission per kWh generated. The total energy generated obviously depends on the capacity factor, grid losses and the total lifetime of the turbines. The article considers 3 cases: The "material intensity factor" represents the variation in the amount of energy per ton of building material. The numbers do NOT include the connection to the grid and the wind induced grid extension. The middle column shows about the correct capacity factor for the Dutch onshore windmills, but the other parameters need adjustment for this case. The material intensity factor is taken to be 1,0 as this is the most probable value. These two factors result in a factor 1,28 in favour of the Dutch case compared to case 2. The lifetime of the turbines is assumed to be 20 years, but the Dutch subsidies are paid over a period of 15 years, so most mills in Holland stop operating after this period. However, many are sold to other countries to continue collecting subsidies there. Calculation based on energy comparison. The data given in ref 2 allows a direct calculation in terms of thermal and electrical energy. The breakdown of wind power results for MW rated wind farm based on the turbines described is given below Table 6. The CO_2 emission part of the table is left out.

Chapter 6 : - Introduction to Functions

Introduction to Machine Learning - Fall, Contents 1 Bayesian Decision Theory page 1 Note 1. 2 Bayesian Decision Theory h 1 2 5 4 2 1 h 2 0 0 3 3 2.

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Chapter 7 : Amazon Machine Learning

Finite State Machines for MSP Contents 1 Introduction Based on a state table, code files can be generated automatically. These code files can be.

Chapter 8 : Heath Robinson (codebreaking machine) - Wikipedia

Machine Instructions The machine instructions are translated into machine language code which can be executed. Examples of machine instructions include functional operations such as Move, Load, Add and Branch.

Chapter 9 : What is a Compiler?

1. Overview This chapter provides a short description of the TWI interface and the TWI module on the Atmel ® megaAVR ®.For more information, refer to the specific device datasheets.