DOWNLOAD PDF COMPUTER ASSISTED

Chapter 1 : Computer Assisted Surgery

Today, computer-assisted bettors are supported by several dozen others with individual roles including accounting, programming, placing wagers and more.

Overview[edit] The automatic machine translation systems available today are not able to produce high-quality translations unaided: Computer-assisted translation CAT incorporates that manual editing stage into the software, making translation an interactive process between human and computer. Higher priced MT modules generally provide a more complex set of tools available to the translator, which may include terminology management features and various other linguistic tools and utilities. Carefully customized user dictionaries based on correct terminology significantly improve the accuracy of MT, and as a result, aim at increasing the efficiency of the entire translation process. Range of tools[edit] Computer-assisted translation is a broad and imprecise term covering a range of tools, from the fairly simple to the complicated. Translation memory tools TM tools , consisting of a database of text segments in a source language and their translations in one or more target languages. Terminology managers, which allow translators to manage their own terminology bank in an electronic form. Some such indexers are ISYS Search Software , dtSearch Desktop and Naturel Concordancers , which are programs that retrieve instances of a word or an expression and their respective context in a monolingual, bilingual or multilingual corpus, such as a bitext or a translation memory Bitext aligners: A source-text sentence or sentence-like unit headings, titles or elements in a list may be considered a segment. Texts may also be segmented into larger units such as paragraphs or small ones, such as clauses. As the translator works through a document, the software displays each source segment in turn, and provides a previous translation for re-use if it finds a matching source segment in its database. If it does not, the program allows the translator to enter a translation for the new segment. After the translation for a segment is completed, the program stores the new translation and moves on to the next segment. In the dominant paradigm, the translation memory is, in principle, a simple database of fields containing the source language segment, the translation of the segment, and other information such as segment creation date, last access, translator name, and so on. Another translation memory approach does not involve the creation of a database, relying on aligned reference documents instead. Add-on programs allow source documents from other formats, such as desktop publishing files, spreadsheets , or HTML code, to be handled using the TM program. Translation memory technology is particularly useful to organizations translating text that contains specialized vocabulary related to a particular industry, such as automotive manufacturing. Rather than searching the Internet, however, a language search engine searches a large repository of Translation Memories to find previously translated sentence fragments, phrases, whole sentences, even complete paragraphs that match source document segments. Language search engines are designed to leverage modern search technology to conduct searches based on the source words in context to ensure that the search results match the meaning of the source segments. Like traditional TM tools, the value of a language search engine rests heavily on the Translation Memory repository it searches against. Terminology management software[edit] Terminology management software provides the translator a means of automatically searching a given terminology database for terms appearing in a document, either by automatically displaying terms in the translation memory software interface window or through the use of hot keys to view the entry in the terminology database. Some programs have other hotkey combinations allowing the translator to add new terminology pairs to the terminology database on the fly during translation. Independent terminology management systems also exist that can provide workflow functionality, visual taxonomy, work as a type of term checker similar to spell checker, terms that have not been used correctly are flagged and can support other types of multilingual term facet classifications such as pictures, videos, or sound. Many alignment programs allow translators to manually realign mismatched segments. The resulting bitext also known as parallel text alignment can then be imported into a translation memory program for future translations or used as a reference document. Interactive machine translation[edit] Interactive machine translation is a paradigm in which the automatic system attempts to predict the translation the human translator is going to produce by suggesting translation

hypotheses. These hypotheses may either be the complete sentence, or the part of the sentence that is yet to be translated. Augmented translation[edit] Augmented translation is a form of human translation carried out within an integrated technology environment that provides translators access to subsegment adaptive machine translation MT and translation memory TM , terminology lookup CAT , and automatic content enrichment ACE to aid their work, and that automates project management, file handling, and other ancillary tasks. This information adapts to the habits and style of individual translators in order to accelerate their work and increase productivity. It differs from classical postediting of MT , which has linguists revise entire texts translated by machines, in that it provides machine translation and information as suggestions that can be adopted in their entirety, edited, or ignored, as appropriate. However, it integrates several functions that have previously been discrete into one environment. For example, translators historically have had to leave their translation environments to do terminology research, but in an augmented environment, an ACE component would automatically provide links to information about terms and concepts found in the text directly within the environment. As of May , no full implementations of an augmented translation environment exist, although individual developers have created partial systems.

Chapter 2 : Computer-assisted Therapy â€" Depression Center

Computer-assisted translation,computer-aided translation or CAT is a form of language translation in which a human translator uses computer hardware to support and facilitate the translation process. [1].

Since the students have greater control over the CAL process, they can decide on their pace of learning. Students can study as fast or as slowly as they like through a course. If they want to repeat some task or review some material again, they can do so as many times as they choose. They can also skip over a topic if they already know about it. This saves time and makes teaching more efficient. Similarly, students can choose what they want to learn and in what order, as students have different learning styles and strategies. This offers a solution to the issue of slow and fast learners. The slow learners will not feel frustrated if they are unable to keep up with the others since they can always review the lesson when it is opportune to study. As their computer competence gets better, the students will be encouraged to use computers more in doing their work. There is a sense of anticipation that makes the student more attentive when learning the lesson. Students are better motivated visually by multimedia materials and listening is supported by seeing. Consequently they would require less teacher time. Humans are multi-sensory beings as we can receive and process information. Since the computer can stimulate the various human senses and present data in a different media can spice up the learning process. Computers encourage learning as they promote enthusiasm and provide stimulating environment. Chats and videoconference help in the development of writing, speaking, and communication skills. They provide speaking practice through debates and opinion chats. The student benefits from a lesson-centered teaching approach. Students give direct attention to the computer s in front of them, which makes them feel more comfortable with their lesson. Generally speaking, the use of computer technology in education makes the class more appealing and interesting. Impediments of CAL The first time computers are introduced into the teaching process, the students may not be familiar with what is going to be presented before them and this may result in general anxiety. If the students particularly older students are not computer-literate, computer anxiety is another issue the teacher will have to deal with. In this environment, it would take considerable time before students become comfortably adapted to CAL. With a computer-based self-assessment class where students have to be left on their own, they may become overwhelmed by the amount of data they are handling. There is also an undesirable state when the students become so excited with what they are seeing on the computer that they hardly pay attention to what is being taught. Agreed that providing attractive presentations is an integral part of CAL, the most important objective of the lecture is that the students learn and understand what is being taught; otherwise, the introduction of computers into the learning process will not be effective. The teacher should try to maintain equilibrium in student-computer interaction. The teacher should regularly check the students to make sure they are learning by asking questions on what is being taught. Conclusion The impediments associated with computer assisted learning are not related to the computer programs, but how to teach with them. A thorough pedagogical review should be initiated to provide guidelines on the use of computer technology in classes. To overcome computer anxiety, the use of computers should be encouraged among students and teachers and practical computer skill classes should be infused in the educational curriculum.

Chapter 3 : Introduction to Computer Assisted Learning (CAL) - Intense School

Computer-aided or computer-assisted is an adjectival phrase that hints of the use of a computer as an indispensable tool in a certain field, usually derived from more traditional fields of science and engineering.

The correct shadow prices are 0. The following is the steps for solving LP problems: Click Tools, then click Solver. In the Set Target Cell box, enter the cell you want to maximize, minimize or set to a specific value Point to cell E Click the Max option button to indicate that you want Solver to maximize the Total Profit. In the By Changing Cells box, enter the cell or range of cells that Excel can change to arrive at the solution Highlight cells C Click the Subject to the Constraints box, then click the Add Click the OK button. Click the Solve button. One can also us Excel to solve linear programming problems using the Solver tool. Before we can use the solver tool, we need to set up our spreadsheet. One needs to include three different things for solver to run: Cells that contain values of the decision variables. A cell which will contain the value of the objective function. Cells which contain the value of all of the functional constraints in the problem. Then we will construct a cell that contains the setup for the sample problem. Once the cells have been setup, select solver under the Tools menu option if Solver does not show up, go to addins but make sure that the box marker solver has been selected. In the popup window you see the box labeled Solver Parameters. In the box labeled Set Target Cell: If your problem is a maximization problem, be sure the button label Max has been selected, otherwise select Min. This tells Excel that it is going to maximizes the value in the Target Cell. In the box labeled "By Changing Cells" select the cells which contain the values of the decision variables. These are the cells which Excel is going to change to maximize the Target Cell. The only thing left to do is to setup the constraints for the problem. Click the Add button to include a new constraint. Let us begin by including the non-negativity constraints. Under Cell Reference select a cell which contains a value of a decision variable. Select OK, you will now see the first non-negativity constraint included in the box labeled "Subject to the Constraints". Repeat this process for all non-negativity constraints. Let us turn to the functional constraints. Click the add button again. Now Under the cell reference, select a cell which contains the value of one of the function constraints. Select the appropriate sign and type in the desired value. Repeat this for all of the functional constraints. Once you have finished inputting the constraints, simply hit the solve button. The next thing you should see is another pop-up which tells you that Solver has found a solution. You should also notice that optimal solution will be reported in the cells which store the value of the decision rules, and the maximized value will be in the cell which contains the value of the objective function. Computer Implementations of Network Models: You may modify it along with the process. Select the command New Problem to start a new problem. The program will display a form to specify the problem. Click the problem type, objection function criterion, and the matrix form for the data entry. Also enter the number of nodes and the problem name. Press OK button when specification is done. A spreadsheet will appear for entering the network connection. Here are some tips: If there is no connection between two nodes, you may leave the corresponding cell empty or enter "M" for infinite cost. Use Tab or arrow keys to navigate in the spreadsheet. You may click or double click a data cell to select it. Double clicking the light blue entry area above the spreadsheet will high-light the data entry. Click the vertical or horizontal scroll bar, if it is shown, to scroll the spreadsheet. Optional Use the commands from Edit Menu to change the problem name, node names, problem type, objective function criterion, and to add or delete nodes. You may also change the flow bounds from Edit Menu if the problem is a network flow problem. Optional Use the commands from Format Menu to change the numeric format, font, color, alignment, row heights, and column widths. You may also switch to the graphic model from the Format Menu. Optional, but important After the problem is entered, choose the command Save Problem As to save the problem. Constraints may also be nonlinear. Enter the problem title, which will be part of the heading for the later windows. Enter the number of variables. Enter the number of constraints. If you enter 0 constraint, the problem is an unconstrained problem. Click or choose the objective criterion of either maximization or minimization. If the specification is complete, press the OK button for entering the problem model. Otherwise, press the Cancel button. The Help button is for this help message.

Numerical experimentation including what-if analysis of the payoff matrix and the subjective probability assignments to the states of nature. The following functions are available in the Da. Select this option from the Problem Specification screen to input prior probabilities and conditional probabilities probability of an indicator value given a state of nature. You must draw the decision tree first to number all nodes, including the terminal nodes. These numbers become the node IDs, when building the decision tree within the program. Mistakes may be corrected by directly typing the changes into the proper cells. For a time series problem, prepare the historical data; for a linear regression problem, prepare the data for multiple factors. Select the command New Problem to specify the problem. Choose the appropriate problem type and enter the scope of the data. Enter the historical data time series or factor data regression on the spreadsheet. If it is a regression problem, you may want to change the factor or variable name before entering the data. Use the command Variable Name from the Edit Menu to change the variable names. Optional Use the commands from Format to change the numeric format, font, color, alignment, row heights, and column widths. To perform forecasting for a time series data, here is the general procedure: If the problem is not entered, use the procedure How to Enter a Problem to enter the problem. For a general good practice, you may want to save the problem by choosing the command Save Problem As before solving it. Select the command Perform Forecasting. The program will bring up a form for setting up the forecasting. See Perform Forecasting for detail. After the forecasting is done, the result will be shown. You may choose the command Show Forecasting in Graph from the Results Menu to display graphical result. To show time series forecasting in graph, here is the general procedure: Note that you may specify to retain the previous forecasting result for comparison. Note that you may change the graph range by using the command Change Range. To perform a linear regression, here is the general procedure: For a general good practice, you may want to save the problem by choosing the command Save Problem As before solve it. Select the command Perform Linear Regression. The program will bring up a form for setting up the regression. See Perform Linear Regression for selecting dependent and independent variables. After the regression is done, the summarized result will be shown. You may choose the commands from the Results Menu to display other related result. To perform estimation or prediction in linear regression, here is the general procedure: Use the procedure How to Perform Linear Regression to perform regression. After the regression is done, the result will be shown.

Chapter 4 : Computer-assisted Learning

Computer-assisted instruction (CAI), a program of instructional material presented by means of a computer or computer systems. The use of computers in education started in the s. With the advent of convenient microcomputers in the s, computer use in schools has become widespread from primary education through the university level and.

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Chapter 5 : Computer-assisted instruction | theinnatdunvilla.com

What are Computer-Assisted Surgical Systems? Different types of computer-assisted surgical systems can be used for pre-operative planning, surgical navigation and to assist in performing surgical.

Chapter 6 : Computer Assisted Coding (CAC) Software | ICD-9 and ICD Coding

Computer assisted surgery (CAS) is nothing short of a surgical breakthrough. By utilizing an infrared navigation camera, wireless Smart Instruments, and intuitive software, this technology improves a surgeon's ability to visualize a patient's anatomy, track instruments, and deliver greater surgical precision.

Chapter 7 : Computer Assisted Review | Electronic Discovery Best Practices

Computer-assisted CBT is available at the University of Louisville Depression Center to augment and speed the results of other therapies. Persons who want to utilize this method of building CBT skills and fighting depression and anxiety can discuss the opportunity with their doctor or therapist.

Chapter 8 : CALI - Your partner in legal education and technology | CALI

A new age of coding takes new technology. Turn coding operations from a burden to a strength with patented

natural-language processing and powerful clinical intelligence.

Chapter 9 : Computer-assisted brain surgery - Mayo Clinic

Computer assisted learning is the future, and that future is now. Education, as a process and discipline, is mainly concerned with imparting knowledge, methods of teaching, and providing/maintaining a conductive learning environment as opposed to informal education and other means of socialization.