Submitted project ideas

CS 121B (CS1), Spring 2014

Fields:

- Agriculutral
- <u>Art</u>
- Art, Art History, Religion
- Art, Math (symmetry)
- <u>Biology</u>
- <u>Chemistry</u>
- Entertainment
- Entertainment/ Academics
- Environmental Studies
- Film Studies
- <u>Games</u>
- <u>Health</u>
- <u>History</u>
- <u>Investing</u>
- <u>Literature</u>
- Literature, Linguistics, Humanities
- <u>Music</u>
- New Media, Animation
- <u>Psychology</u>
- <u>Sociology</u>
- Text/Data Analysis, Artificial Intelligence
- <u>Visual arts, media</u>
- Zoology, Management Studies, Environmental Studies
- <u>armomancy</u>
- <u>chemistry</u>
- <u>literary studies</u>
- <u>mathematics</u>
- <u>tech support?</u>

34 submissions

Agriculutral

Brief description: Turtle Simulation

Description:

Use turtle to simulate a drone flying over someones crop field. Stopping at particular points to take multiple times of images that help the farmer understand what they need to do to make their crop grow better.

Relevant field(s): Agriculutral

10520:1

Art

Brief description: Image Processing Description:

Write a program that sorts images into categories based on the amount of a certain color in their image.

Relevant field(s): Art

10520:2

Image processing ideas -- good!

Brief description: picture rating system Description:

Gives a overall rate to a picture by figuring out the how color various in that picture. **Relevant field(s): Art**

10524:2

Art, Art History, Religion

Brief description: Art "restoration"

Description:

Inspired by failed attempts at art restoration (

http://en.wikipedia.org/wiki/Ecce_Homo_(El%C3%ADas_Garc%C3%ADa_Mart%C3%ADnez for example), this project recreates a work of religious art from an image file using turtle graphics.

Relevant field(s): Art, Art History, Religion

Image processing -- good Turtle interaction -- difficult

Art, Math (symmetry)

Brief description: Intricate drawing Description:

Great!

Create a work of art (perhaps an intricately drawn tree and sun scene) using turtle graphics. **Relevant field(s): Art, Math (symmetry)**

10542:2

Biology

Brief description: Genetic Variance Checker Description:

Takes two strings of nucleotides representing the same gene in two different organisms and returns the percent similarity between the two

Relevant field(s): Biology

10549:2

Chemistry

Brief description: Chemical Reaction Predictor Description:

Create a program that would predict whether or a chemical reaction would take place or not based on parameters entered. Would would use thermodynamic equations as well as drawing on chemical reaction dictionaries containing the value of certain variables under certain conditions. **Relevant field(s): Chemistry**

10537:1



Very cool!

Design a program that allows the user to combine a specific amount of two reagents. Indicate and show how much product is produced, along with which products are produced. **Relevant field(s): Chemistry**

10545:1

Brief description: Element Database Description:

Consider objects --

A database that stores different information pertaining to the different elements. Included could be full name, symbol, atomic mass, picture, etc.

Relevant field(s): Chemistry

10523:2

Entertainment

Brief description: Battleship Description: Similar to Tic Tac Toe Relevant field(s): Entertainment Prefer applications to a field Turtle User Interface difficult Turtle Animation would be good AI, Physics could be difficult

10536:2

Brief description: Tic Tac Toe Description:

A Tic Tac Toe game that allows both AI and human-human controls. Using Turtle Grapahics **Relevant field(s): Entertainment**

10536:1

Entertainment/ Academics

Brief description: Quiz Show Game objects could be good, with the dictionary Description: A quiz show game collects information from a dictionary. It will be interesting to make not just 10536:3

Environmental Studies

Nice interdisciplinary project
Description:
Use turtle graphics to create art depicting an environmental issue/topic.
Relevant field(s): Environmental Studies
10526:2
Film Studies

Brief description: Film Organization Dictionary Description: Consider objects

A program that can recommend films to watch based on an input of genre, time period, or other factors.

Relevant field(s): Film Studies

10528:1

Games

Brief description: Visual Novel Engine Description: multimedia is good User interaction is difficult

Visual novels are a mixture of psuedo-game, novel, and animation. The most popular freeware version is actually built on python. The engines generally record decisions the player makes and decides which preset route the player will follow and gives them the corresponding ending.

Relevant field(s): Games

10529:2

Health

Brief description: Fitness Description: Write a program to track the food you eat and your daily exercise. According to the results the program could give you suggestions about how much exercise you need. Relevant field(s): Health
10519:1

History

Brief description: History Database Description:

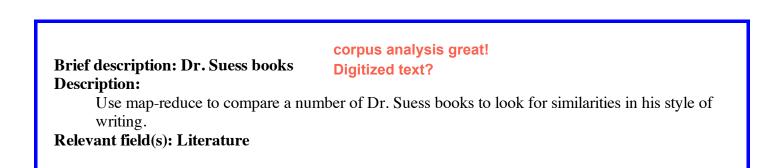
Create a database that holds important events through out history for particular days/days. **Relevant field(s): History**

10523:1

Investing

Brief description: Stock market simulation Description: Stock market simulation with graphs representing data made from turtle graphics Relevant field(s): Investing

Literature



Literature, Linguistics, Humanities

Brief description:	Authorship
Description:	

Use WMR or other approaches to compare different works in a corpus for authorship. Compare sentence length/use of certain punctuation from one famous author to those of another from the same time period; or give evidence that the same person (or that different people) wrote two anonymous works. For example: Hemingway and Fitzgerald

Relevant field(s): Literature, Linguistics, Humanities

10542:1

Music

Brief description: Choir Roster Description: Create a dictionary with each member of a choir as a key with contact information, email address, street address, phone number, etc. as values. Relevant field(s): Music
Brief description: Choral Library Description: Create a choral library with information pertaining to each choral anthem in a library such as title, composer, source of text, voice parts, season, publisher, order number, etc. Relevant field(s): Music 10548:2

New Media, Animation

A battleship game that allows the user to play with the computer. There would be animations to accompany the battle ship board and every move. For instance, an animation if a ship sunk. **Relevant field(s): New Media, Animation**

10532:1

 Brief description: Animated Clock
 Could work well.

 Description:
 Inspired by the second Hunger Games book. The clock will resemble the arena that the tributes fought in. At the stroke of each hour an animation will occur and there will be noise to correspond to the hour.

 Relevant field(s): New Media, Animation

10532:2

Psychology

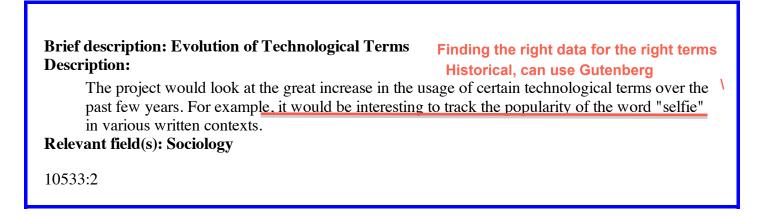
Brief description: Conversation Analyser Description:

Looks for words in an input of multiple lines and returns blanket statements based on their presence

Relevant field(s): Psychology

10528:2

Sociology



Text/Data Analysis, Artificial Intelligence

Brief description: Conversation AI
 Description:

 Searches the input for certain key words in a dictionary and makes responses based on what it finds

 Relevant field(s): Text/Data Analysis, Artificial Intelligence

10529:1

Visual arts, media

Brief description: Battleship Description:

An interactive game of battle ship (either against the computer or against another person), possibly using turtle graphics to incorporate a visual component.

Relevant field(s): Visual arts, media

10530:1

Zoology, Management Studies, Environmental Studies

Brief description: Zoo Simulation Description:

Similar to the stock market simulation, different aspects of running a zoo change over time (with more iterations of the simulation). However, every so often ("monthly", "yearly"), the simulation accepts user (or "zookeeper") input on zoo administration decisions.

Relevant field(s): Zoology, Management Studies, Environmental Studies

10538:2

armomancy

Brief description: Luck point

Description:

After inputting the current date and the user's birthday, the lucky point for that person on that day should come out according to a serious of formula.

10524:1

chemistry

Brief description: Showing Boltzmann Distribution

Description:

The Boltzmann distribution in chemistry is the most probable distribution of particles spread out among various energy states. The program could set up a few energy levels with n particles and randomly pick a configuration n times. Because Boltzmann distribution is the most probable, most of the configurations should be in agreement with Boltzmann distribution predicts.

Relevant field(s): chemistry

10533:1

literary studies

Brief description: text analysis Description:

program that analyzes a given text and organizes the data in an easy to read format. examples of data provided would be number of sentences, words, punctuation marks. Other examples might be average number of words per sentence, average word length, or average sentences per paragraph.

Relevant field(s): literary studies

10544:2

mathematics

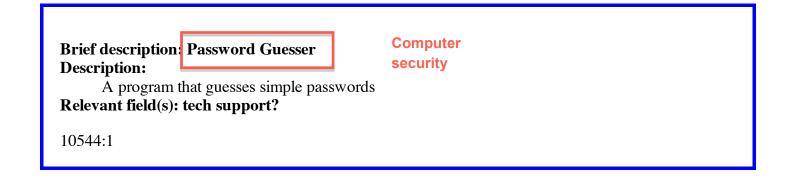
Brief description: Sudoku Solver

Description:

Create a program that accepts an input of a Sudoku puzzle and solves the puzzle. **Relevant field(s): mathematics**

10530:2

tech support?



rab@stolaf.edu, April 23, 2014

<u>Disclaimer</u>