Submitted project ideas

CS 121B (CS1), Spring 2014

Fields:

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

34 submissions

Agriculutral

Interactive is difficult with turtle

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

10538:1

Art, Math (symmetry)

Brief description: Intricate drawing Great!
Description:
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 Very cool!
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 Great!!!
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

Brief description: Chemical Reaction Great!!
Description:

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

Consider objects --

Description:

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

Prefer applications to a field
Turtle User Interface difficult
Turtle Animation would be good
AI, Physics could be difficult

Description:

Similar to Tic Tac Toe

Relevant field(s): Entertainment

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

one but a library of subjects to be played from.
Relevant field(s): Entertainment/ Academics

10536:3

Environmental Studies

Nice interdisciplinary project

Brief description: Computer Art
Description:
Use turtle graphics to create art depicting an environmental issue/topic.
Relevant field(s): Environmental Studies

10526:2

Film Studies

Consider objects

Brief description: Film Organization Dictionary
Description:
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

multimedia is good
User interaction is difficult

Brief description: Visual Novel Engine
Description:
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

10531:1

Literature

corpus analysis great!
Digitized text?

Brief description: Dr. Suess books
Description:
Use map-reduce to compare a number of Dr. Suess books to look for similarities in his style of writing.
Relevant field(s): Literature

10526:1

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

10548:1

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

Brief description: Interactive Game GUI (Graphics User Interface) ? difficult
Description:

Description:
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

Brief description: Evolution of Technological Terms Finding the right data for the right terms
Description: Historical, can use Gutenberg
The project would look at the great increase in the usage of certain technological terms over the past few years. For example, it would be interesting to track the popularity of the word "selfie" in various written contexts.
Relevant field(s): Sociology

10533:2

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.
Relevant field(s): armomancy

Relevant field(s): arithmancy

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?

Brief description: Password Guesser
Description:

A program that guesses simple passwords

Relevant field(s): tech support?

10544:1

Computer security

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rab@stolaf.edu, April 23, 2014