Santi Santichaivekin

jsantichaivekin@hmc.edu • github.com/ssantichaivekin • Mobile : 347-401-3715

Education

Harvey Mudd College Claremont, CA
B.S. in Computer Science, GPA 3.81 *Class of 2021*

Coursework

In progress: Software Development; Complexity Theory; Probability; Digital Electronics
Completed: Machine Learning and Search; Advanced Topics in Algorithms; Science of Debugging; Computer Systems; Phylogenic Tree Reconstruction; Data Structures and Program Development; Multivariable Calculus; Computability and Logic; Differential Equations; Linear Algebra

Skills

Proficient : Python | Knowledgeable: Golang, Java, C++, C, C#, JavaScript, Bash, Prolog, gdb, pdb, rr, distributed systems

Experience

Software Engineer Intern, *Uber ATG*, San Francisco, CA Summer 2019

- Implemented an algorithm to help reduce the number of latitude-longitude waypoints in routing engine for self-driving cars. Used Java.
- Developed metrics for measuring the consistency of self-driving car constraints such as "do not take unprotected left turn" and "do not enter school area" among different services in self-driving platform in Golang codebase.

CS Tutor/Grader, *Harvey Mudd College*, Claremont, CA Spring 2018 - Current

- Tutor and grade Algorithms class which teachs different programming paradigms and proof techniques.
- Tutored and graded Computability and Logic class which teaches proof methods, automata, prolog, and computability theory.
- Wrote an autograder for prolog using python subprocess module and swipl prolog compiler (github.com/ssantichaivekin/prolog-grader)
- Tutored and graded CS For Insight class which focused on scripting and using python libraries for everyday tasks such as file management, web-scraping, machine learning, and HTML generation. Used Python.

Software Engineer Intern, *Microsoft*, Bellevue, WA Summer 2018

- Implemented an event queue to perform layout calculations in the background across multiple frames. This makes complex visual transitions in Microsoft Whiteboard application more responsive. Used C#.

Personal Projects

Halite3 AI Competition Bot (github.com/ssantichaivekin/halite3) Fall 2018

- Written evaluation functions to plan ship movements and navigate them around the game map without colliding. Used python and switched to C++.
- Used Evolutionary Algorithm (python) to fine-tune hyperparameters on DigitalOcean server.
- Finished with rank 201 out of 4014 total participants.

Text to Color Tone (github.com/ssantichaivekin/text-to-color-tone) Summer 2018

- Used Google Custom Search API and k-nearest neighbor algorithm to find a representative color range of any text and display it on screen using matplotlib python library.
- Computed the color tone of different word category such as adjectives, nouns, verbs, words that start with "a", and words with first vowel sound "ow." Used NLTK dictionary to group words and Digital Ocean cloud server to download images and perform calculations.

Honors and Awards

5th place in ACM-ICPC Contest SoCal Region, 2018
5th place in ACM-ICPC Contest SoCal Region, 2017
1st place in Harvey Mudd College Microsoft Coding Competition, 2017