Santi Santichaivekin

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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, React, React Native, Bash, Prolog, gdb, pdb, rr, distributed systems

Experience

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.
- 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.

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.

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#.

Publications

Santichaivekin, S., Mawhorter, R. & Libeskind-Hadas, R. *An efficient exact algorithm for computing all pairwise distances between reconciliations in the duplication-transfer-loss model.* BMC Bioinformatics 20, 636 (2019).

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++ for performance.
- Used Evolutionary Algorithm in python to fine-tune hyperparameters on DigitalOcean server.
- Finished with rank 201 out of 4014 total participants.

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