Santi Santichaivekin

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Education

Harvey Mudd College Claremont, CA
B.S. in Computer Science, GPA 3.81 *Class of 2022*

Coursework

Advanced Topics in Algorithms; Complexity Theory; Machine Learning and Search; Digital Electronics; Science of Debugging; Computer Systems; Software Development; Data Structures; Multivariable Calculus

Skills

Proficient: Python | Knowledgeable: Java (Spring), JavaScript (NodeJS, React, React Native), Go, C++, C, C#, Bash, SQL, Kubernetes, Firebase, Prolog, System Verilog

Experience

Software Engineer, *Line Man Wongnai*, Bangkok, Thailand Spring 2020 - Present

- Contributed bugfixes, refactors, and new features to the registration, authorization, payment calculation, and revenue report of the Wongnai restaurant management system. Used Java (Spring) and JavaScript (NodeJS, React).
- Wrote port forward and remote debugging scripts and documentations for three backend services.

Research Assistant (Remote), *Harvey Mudd College*, Claremont, CA Summer 2020

- Managed a team of six under professor supervision to develop Empress—a Python application that helps biologists understand how different species lived together in the past. (github.com/ssantichaivekin/empress)
- Made key design and style decisions, managed GitHub issues, led rigorous code review processes.
- Created a pipeline for testing, freezing, and packaging the application using Pyinstaller and Github Actions.
- Held Zoom information sessions on Git, GitHub, text editors and integrated development environments, Python best practices, and Python debugging tools for rising sophomores in the team.

CS Tutor/Grader, *Harvey Mudd College*, Claremont, CA Spring 2018 - Fall 2020

- Tutored and graded Advanced Algorithms, Algorithms, two semesters of Computability and Logic, and two semesters of Computer Science for Insight.

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 Uber's self-driving platform. Used Go.

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

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

Selected Publications

Santichaivekin, S., Yang, Q., Liu, J., Mawhorher, R., Jiang, J., Wesley, T., Wu, Y., & Libeskind-Hadas, R. *eMPRess: A Systematic Cophylogeny Reconciliation Tool*. Bioinformatics, btaa978 (2020).

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

- Designed and wrote evolutionary algorithm and evaluation functions to navigate ships and collect resources using C++ and Python. Fine-tuned hyperparameters on remote server. Finished 201st place 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