Alex Hadley

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Education

Harvey Mudd College, Claremont CA (GPA 3.97)   May 2022
B.S. Computer Science

Relevant Coursework

Spring 2021: Algorithms, Natural Language Processing

Data Structures and Program Development, Software Development, Computability and Logic,
Computer Science Principles, Scientific Computing, Computational Physics, Discrete Mathematics

Skills

Languages: Python, C++, Java, Julia, Dart, JavaScript, HTML, CSS
Software: Git, Vim, Flutter, Firebase, LaTeX, MATLAB, Mathematica

Work Experience

Software Engineer Intern, Viasat – canceled due to COVID-19 pandemic   Summer 2020
- Attended a two-week remote professional development workshop in place of internship
- Learned about project management, agile scrum, lean six sigma, and leadership

Assistant Instructor, MIT Beaver Works Summer Institute   Summer 2019
- Taught Python and OpenCV (computer vision library) to a class of 25 middle schoolers
- Helped students program miniature race car robots for an autonomous racing challenge
- Created lessons with other instructors for future iterations of the summer course
- Gained familiarity with Git, Vim, the command line, and collaborating using GitHub

Freelance Developer, La Mano Pottery   Summer 2018
- Coded and designed an online gallery for potters to easily find and view glaze combinations
- Gained familiarity with JavaScript, jQuery, PHP, web development, and web design
- Gallery can be viewed at www.lamanopottery.com/glaze-gallery (password: Sassy)

Projects

Claremont Colleges Humans vs. Zombies App (started in Software Development course)   Fall 2020
- Collaborated with a team of students to develop an app to facilitate a campuswide game of tag
- Learned about app development using Flutter, Dart, Firebase, and authentication APIs
- Gained experience with project management and software development phases, including
  requirements elicitations, architecture and design reviews, and postmortem reports

Helium Atom Simulation (github.com/alexhad6/DiffusionMonteCarlo)   Summer 2020
- Implemented a Monte Carlo simulation of a helium atom in MATLAB
- Gained experience with reading and implementing methods from technical research papers

Galaxy Simulator (github.com/alexhad6/ParallelBarnesHut.jl)   Spring 2020
- Developed a package for the language Julia to efficiently simulate the motion of stars in a galaxy
- Gained familiarity with multithreading, approximation algorithms, and package creation

Research Experience

Physics of Soft Matter Laboratory, Harvey Mudd College   Fall 2020
- Explored numerical methods for solving one-dimensional wave equations in MATLAB
- Gained experience using computer science to conduct research in physics