Sarah Lau Hale

s.hale@columbia.edu | shale@hmc.edu

EDUCATION

COLUMBIA UNIVERSITY
PhD in Computational Astrophysics
Present | New York, NY

HARVEY MUDD COLLEGE
BS in Physics & Computers
May 2018 | Claremont, CA
High Distinction
Departmental Honors

LINKS

LinkedIn:// slhale
Github:// slhale

COURSEWORK

Artificial Intelligence
Neural Networks
Computer Systems
Data Structures and Program Development
Computational Methods in Physics
Fourier Series and Boundary Value Problems

SKILLS

Machine Learning • Deep Learning
Research • Software Development
Programming Languages:
C++ • Python • Keras • Bash/shell
Java • MATLAB • Mathematica
JavaScript • HTML • CSS

AWARDS

2018 - National Science Foundation GRFP Honorable Mention
2017 - Summer Undergraduate Research Fellow
2014 - National Merit Scholarship
2014 - Andria Erzberger Physics Scholarship

EXPERIENCE

GOOGLE | Software Engineer Intern
May 2018 – Aug 2018 | Mountain View, CA
Working on the **Dynamic Search Ads' Quality** team to improve the precision and recall of the query/advertisement matching model.

GOOGLE | Engineering Practicum Intern
May 2016 – Aug 2016 | New York, NY
Facilitated addition of new sources of data to local search on **Google Maps** by creating an internal pipeline written in C++ to transform open government data for use in Maps.

NASA | Software Engineer Intern
Jun 2015 – Aug 2015 | Mountain View, CA
Developed for **Open MCT**, a web-based data visualizer intended for mission control usage. Implemented a modular search algorithm so as to be extendable for future use cases, and designed a user interface for it and object inspection.

RESEARCH

LIGO | Undergraduate Research Fellow
Jun 2017 – May 2018 | Caltech & Harvey Mudd College
Personally developed a **deep learning gravitational wave classifier** prototype which can distinguish simulated gravitational waves from transient noise with >99% accuracy. Initially funded by a Caltech Summer Undergraduate Research Fellowship, then continued as my undergraduate thesis work.

SOUTH POLE TELESCOPE | Undergraduate Researcher
Sep 2016 – May 2017 | Harvey Mudd College
Analyzed calibration data from the South Pole Telescope to ensure the telscope was sensetive enough to study the cosmic microwave background radiation.

KAPAO | Undergraduate Researcher
Sep 2015 – May 2017 | Pomona College
Developed software for the Pomona Adaptive Optics team to analyze telemetry data and choose observation targets.

LEADERSHIP

PRISM | Mentor
Aug 2017 – May 2018 | Harvey Mudd College
Lead a small group of first-year Harvey Mudd students in bonding activities and events to acclimate them to the LGBTQA+ community at Mudd.

PRISM | Treasurer
Aug 2017 – May 2018 | Harvey Mudd College
Handled budget of over $3,000 and attended weekly administrative and event planning meetings, as well as the events planned at those meetings.

EAST DORM | Treasurer
Jan 2016 – May 2018 | Harvey Mudd College
Handled budget of over $4,000 and gave presentations at dorm meetings.