Jonah Langlieb

jonah.langlieb@gmail.com | 443.595.7002
https://jzl.github.io/ | Github://jzl | LinkedIn://jonah-langlieb

OVERVIEW

An experienced student researcher with a knack for collaboration, a strong work ethic, a breadth of interdisciplinary knowledge, and a desire to communicate effectively

EDUCATION

SWARTHMORE COLLEGE

Expected Graduation: May 2020
Computer Science Honors Major
Mathematics Course Major
Mathematics Honors Minor

TECHNICAL SKILLS

Proficient: Python (scipy) • JavaScript/Node.js • Linux Sysadmin • BASH • LaTeX
Familiar: C • C++ • SQL • MatLab • PHP • OpenCV • R

COURSEWORK

COMPUTER SCIENCE

Honors Thesis *(Currently)*
Theory of Computation *(Currently)*
Artificial Intelligence
Operating Systems
Computer Networks
Parallel/Distributed Computing *(Grader, Lab TA, Writing Associate)*
Algorithms
Intro Computer Systems

MATHEMATICS

Category Theory *(Currently)*
Statistical Methods II *(Currently)*
Major Thesis (in Origami)
Real Analysis
Advanced Abstract Algebra
Honors Multi-Variable Calculus
Honors Linear Algebra

OTHER

Cellular & Molecular Biology *(Writing Associate)*
Population Biology *(Writing Associate)*
Intro to Chemistry
Electrical Circuit Analysis

AWARDS

Best Poster - Swarthmore Computer Science 2019 Senior Poster Session
Member - Sigma Xi Research Society

RESEARCH EXPERIENCE

CHAGANTI NETWORKS LAB | Swarthmore Computer Science Department

Jan 2019 - Present | Swarthmore, PA

- Worked with **Professor Vasanta Chaganti** on privatizing mobile user trajectories by applying differential privacy to Wi-Fi syslogs
- Surveyed the results/algorithms of papers and converted into efficient NumPy code
- Analyzed our data to compare to existing models, in order modify the related algorithms to best fit our goals
- Our work was presented at the ACM Internet Measurement Conference 2019 and will be the subject of my honors thesis.

LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS | National Institutes of Heath

June 2018 – August 2018 | Bethesda, MD

- Worked with **Dr. Sameer Antani** on using traditional image analysis and machine learning to analyze biomedical echo-cardiograms
- Learned to survey and re-implement research paper image-analysis algorithms in OpenCV as well as apply different ML models to segment echo-cardiograms
- Gained experience in collaborating in a fast-paced atmosphere and self-directed learning using research papers across a wide variety of subfields
- Presented my work at the 2018 NIH Summer Poster Day

DAVIDSON BIOLOGY LAB | Swarthmore Biology Department

May 2017 – July 2017 | Swarthmore, PA

- Designed and worked on a summer research project in cellular biology with **Professor Brad Davidson**
- Conducted wet-lab research in fluorescently localizing certain proteins in *Ciona intestinalis* as well as genomic and image analysis computational research in Python and MatLab
- Designed custom bioinformatics software to help understand local- and large-scale differences simultaneously between different organisms' versions of the same protein

WORK EXPERIENCE

SWARTHMORE WRITING PROGRAM | Writing Associate

April 2017 - Present | Swarthmore, PA

- Tutored a group of 10-15 students each semester throughout all stages of the writing process, as well as had walk-in appointments
- Learned how to be an effective, empathetic, and flexible tutor and how to collaboratively communicate complex concepts clearly

SWARTHMORE COLLEGE COMPUTER SOCIETY | President

October 2016 - Present | Swarthmore, PA

- Lead SCCS, an student-run club which manages a full-stack server cluster. We sysadmin Linux servers to provide custom services to help students
- Created a course planner (`https://schedule.sccs.swarthmore.edu/`) my freshman year, used by over half of students each semester
- Redesigned an email newsletter to include a custom weather visualization and events, now viewed by $^3/_4$ of the students daily