Jonah Langlieb

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https://jzl.github.io/ | Github://jzl | LinkedIn://jonah-langlieb

OVERVIEW

An experienced 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
Cum. GPA: 3.84

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