Robert Hwang

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EDUCATION

Swarthmore College, Swarthmore PA *May 2018*

Bachelor of Arts, Computer Science

Relevant coursework

- *Computer science:* Bioinformatics, Data structures and Algorithms, Machine Learning, Computer Systems, Computer Animation, Operating Systems, Theory of Computation, Programming Languages
- *Mathematics:* Statistical Methods, Single Variable Calculus, Linear Algebra, Discrete Mathematics
- *Biology:* Molecular Ecology and Evolution, Biochemistry, Organismal/Population Biology, Molecular Biology

Relevant Skills

- *Languages:* Python (Proficient), SQL (Familiar), Javascript (Familiar)
- *Frameworks and Tools:* Apache Airflow, Prometheus, Grafana, Kubernetes, Helm, Docker, FluentD, Elasticsearch, PostgreSQL, Git

ENGINEERING EXPERIENCE

***Software Engineer,* Astronomer, Cincinnati OH** *August 2018 – Present*

- Greatly improved the Apache Airflow on Kubernetes monitoring stack, by 1) Deploying a service to the platform that communicates with the Kubernetes API and 2) Writing PromQL queries to implement Kubernetes resource and state information monitoring dashboards in Grafana
- Deployed an EFK (Elasticsearch FluentD Kibana) logging stack for the enterprise platform to collect streaming logs from all Airflow components
- Built a log handler for running Apache Airflow on Kubernetes to improve the efficiency and uptime of the platform by removing the need for persistent worker storage

***Software Engineering Intern,* Everywear, New York City NY** *June – August 2017*

- Using Vue.js, I developed the user page to input preferences on specific outfits against a RESTful API
- I developed a data ingestion algorithm in Python to isolate key words using the NLTK natural language processing toolkit

DATA ANALYSIS AND RESEARCH EXPERIENCE

***HHMI Research Assistant,* Mountain Lake Biological Station, Pembroke VA** *June – August 2016*

- Examined covariance among several quantitative social network metrics to investigate the effects of interactions among conspecifics on individual fitness
- Applied statistical modeling in R to examine a hypothesis concerning social niche construction as a consistent phenomenon across populations

PROJECTS

Cheetah (Django, Python) https://github.com/rhwang10/cheetah

- Web application with a fully implemented user authentication system to authenticate users

newsSpot (Vue.js, Javascript) https://github.com/rhwang10/newsSpot

- News web application to provide a UI for users to connect recently published news articles to related Reddit threads

Classifier Based Neural Networks (Python) https://github.com/rhwang10/Classifier-based-Neural-Networks

- Cleaned and preprocessed data, and implemented a modular classifier-based neural network in Python using SciKit-Learn, SciPy, and NumPy libraries
- Implemented a sequential neural network with a sigmoid activation function and the RMSProp optimizer