Kyung Hoi (Joseph) Min

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EDUCATION

CALTECH
BS in Biology and Computer Science
Present | Pasadena, CA
Expected Graduation: Jun 2020
Cum. GPA: 4.0 / 4.0

COURSEWORK

UNDERGRADUATE
Biology
Regulation of Gene Expression
Cell Biology
Genetics
Bioinformatics *(Planned)*
Biomolecular Computation *(Planned)*

Computer Science
Programming Methods
Decidability and Tractability
Communication Networks
Algorithms
Learning systems

SKILLS

PROGRAMMING
- Python
- Javascript
- HTML/CSS
- C, C++
- Matlab
- R

SOFTWARE
- Docker
- Django
- Apache Airflow
- AWS S3, Batch, DynamoDB
- Elasticsearch, Grafana
- React.js
- CI/CD
- Celery, RabbitMQ
- Numpy, Pandas

DATA ANALYSIS
- RNA-seq *(QC, Kallisto, Sleuth)*
- Bootstrapping *(significance testing)*

MOLECULAR BIOLOGY
- PCR
- Cloning
- Purification

PROJECTS

NGS PIPELINE | SOFTWARE ENGINEERING INTERN, GINKGO BIOWORKS
Jun 2019 - Sept 2019 | Boston, MA
- Migrated in-house NGS pipeline to the cloud (AWS S3, Batch, DynamoDB).
- Implemented pipeline metrics collection with Elasticsearch and Grafana.
- Implemented contamination screening via taxonomy analysis with Centrifuge.

ALASKA | FULL-STACK DEVELOPER, CALTECH
Jan 2017 - Aug 2019 | Pasadena, CA
- Developed a framework for automated, complete RNA-seq analysis.
- Parse Server backend. Frontend portal in Javascript, HTML/CSS.
- Presented a poster at the 21st International *C. elegans* Conference.
- Available at http://alaska.caltech.edu/ and source code on Github.

RESEARCH

PACHTER LAB | UNDERGRADUATE RESEARCHER
Oct 2019 – Present | Pasadena, CA
Working with **Sina Booeshaghi** and **Prof Lior Pachter** on a single-cell RNA-seq project with Kallisto.

STERNBERG LAB | UNDERGRADUATE RESEARCHER
Jan 2017 – Jun 2019 | Pasadena, CA
Worked with **David Angeles PhD.** and **Prof Paul W. Sternberg** on bioinformatics and molecular biology projects involving the model organism *C. elegans*, most notably Alaska (above).

EXTRACURRICULARS

YEARBOOK | BUSINESS MANAGER, DESIGNER, PHOTOGRAPHER
Sept 2016 – Present | Pasadena, CA
Worked on the yearbook, *The Big T*, as business manager, designer and photographer. Established a new advertisement system, shared cloud storage system, job organization and assignment system, and payment reimbursement system. Designed pages and took/edited photos with Adobe software.

HEALTH ADVOCATE | EMERGENCY MEDICAL RESPONDER
Sept 2017 – Present | Pasadena, CA
American Red Cross certified emergency medical responder and basic life support provider. Worked as the dormitory health advocate and provided first aid to students.

STUDENT GOVERNMENT | LLOYD HOUSE HISTORIAN
Jun 2017 – May 2019 | Pasadena, CA
Recorded Lloyd House (dormitory) events by taking photos. Established a new shared cloud storage system for the house to distribute these photos.

AWARDS

2018   Samuel P. and Frances Krown SURF Fellowship
2017   SURF Fellowship