Kyung Hoi (Joseph) Min

📞 626.240.9851 | ✉ kmin@caltech.edu | ⚡ lioscro | 🌐 lioscro.github.io/homepage/ | 💼 lioscro | 🐦 @lioscro

EDUCATION

CALTECH
BS in Biology and Computer Science
Present | Pasadena, CA
Expected Graduation: Jun 2020
Cum. GPA: 4.0 / 4.3

COURSEWORK

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

Computer Science
Programming Methods
Decidability and Tractability
Communication Networks
Algorithms
Learning systems *(machine learning)*

SKILLS

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

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)*
- scRNA-seq *(Kallisto, Bustools)*

MOLECULAR BIOLOGY
- PCR
- Cloning
- Purification

PROJECTS

COMMONS CELL ATLAS | Software Developer, Caltech
Sept 2019 – Present | Pasadena, CA
- Repository for all the world's single-cell RNA-seq data.
- Arbitrary aggregation and comparison of data across multiple datasets.
- Web application written in React.js and Django.

KB-PYTHON | Software Developer, Caltech
Oct 2019 – Present | Pasadena, CA
- A Python wrapper around popular pipeline for scRNA-seq pre-processing.
- Pre-processes scRNA-seq data into gene count and RNA velocity matrices.
- Provides pre-built reference indices for pseudoalignment.

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.
- 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 developing software tools to store, distribute, and analyze scRNA-seq data. Most notably kb-python and Commons Cell Atlas (both above).

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, Editor-in-Chief
Sept 2016 – Present | Pasadena, CA
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.

AWARDS

2018   Perpall Speaking Competition Semi-finalist
2018   Samuel P. and Frances Krown SURF Fellowship
2017   SURF Fellowship