

Education

Stanford University

Sep 2018 - Jun 2020

- M.S. Biomedical Informatics. GPA 4.0/4.0.

University of California, Berkeley

Sep 2014 - May 2018

- B.A. Computer Science, B.A. Cognitive Science (Neuroscience). GPA 3.9/4.0.

Skills

- Python, Go/Golang, C++, C, SQL, R, Bash, Ruby, Java, Javascript.
- Django, Ruby on Rails, HTML5, CSS3, Docker, Bazel, AWS | Linux, Unix, Windows, Git.

Relevant Experience

Bioinformatics and Data Engineer, GRAIL, Inc

Jul 2020 - present

- Designs experiments to probe the use of cfRNA to predict occurrence in multiple types of cancer.
- Builds bioinformatics pipelines and modules to transform raw cfRNA data to counts of genes used in cancer classification.

Bioinformatics Research Assistant, Mignot Lab, Stanford Center for Sleep Science and Medicine

Sep 2019 - Jul 2020

- Builds bioinformatics pipelines to explore the genetic and proteomic basis of sleep disorders such as narcolepsy.

Software Engineer Intern, GRAIL, Inc

Jul 2019 - Sep 2019

- Built resource tracker for next generation sequencing flow cell runs. Deployed as default tool installed for all engineers. Long-running service that maintains updated catalogue with fast query of sequencing data at GRAIL, including two cloud providers (AWS, BackBlaze), a local database and a local 20+ machine cluster. Golang, AWS S3, AWS DynamoDB Go APIs.

Data Science Research Assistant, Williams PanLab, Stanford University

Feb 2019 - Jul 2019

- Analyzed large Optum Clinformatics health datasets to address questions around the distribution of depression and its impact on work and health. Collaboration with Prof. Leanne Williams (Neuroscience) and Prof. Jeffrey Pfeffer (Business).

Software Engineering and Computational Modeling Intern, Koniku

Jun - Sep 2018

- Koniku merges silicon chips with synthetic neurobiology to create sensing devices far superior to electronic noses.
- Built data ingestion, processing, visualization and analysis pipelines for calcium imaging and neuroelectric data on AWS.
- Built web applications (Django, Elastic Beanstalk) for visualization of biological data.

Research Assistant, Mark D'Esposito Cognitive Neuroscience Lab, UC Berkeley

Jan 2016 - Jan 2018

- Developed algorithms to analyze data from TMS+fMRI experiments to discover connectivity patterns between brain areas. OHBM 2017 Poster "The Thalamus Mediates Interactions Between Large-Scale Cortical Functional Networks".

Projects

Biomedical Graph Visualizer for Identifying Drug Candidates

- Built biomedical knowledge graph for drug discovery, designed graph visualization tools, and served these tools through a free and user-friendly web interface. <https://biomedical-graph-visualizer.wl.r.appspot.com/>

Multi-Hop Reasoning for the HotpotQA Dataset (CS224N: NLP with Deep Learning)

- HotpotQA tests QA over multiple paragraphs of information. Integrated BERT with Bi-Attentional RNN to produce 40% improvement over baseline. web.stanford.edu/class/archive/cs/cs224n/cs224n.1194/reports/custom/15743318.pdf

Better Inference Scores for Chemical-Disease Relationships (CS224W: Machine Learning with Graphs)

- Built Graph Auto-Encoder model for edge prediction in a Chemical-Gene-Disease tripartite graph from the Comparative Toxicogenomics Database. web.stanford.edu/class/cs224w/project/26424756.pdf

Leadership

Chinese Entrepreneurs Organization, Stanford University (Vice President) ceoceo.org

Sep 2018 - Jun 2020

- Led team in planning 10-week incubator program for 20 selected teams to develop User Research, PMF, Business Models, Growth Strategy, and a final BP that culminates in a Pitch Day with a panel of distinguished VC judges.

Neurotechnology at Berkeley (co-Founder, President) neurotech.berkeley.edu

Aug 2016 - May 2018

- Led 10-person team that plans workshops, hackathons, talks about biosensing technology for 100+ general members.