David Li

Software Engineer

zdavidli@gmail.com | www.davidzli.com | zdavidli | zdavidli

Education

The Johns Hopkins University
Baltimore, MD

M.S.E. Computer Science — *May 2018 - May 2019*

- Advisor: Dr. Gregory D. Hager; Mentor: Dr. Ayushi Sinha
- Research Project: *Unsupervised Detection of Tool Presence in Endoscopic Video*
- GPA: 3.88
- **Relevant Coursework:** Vision as Bayesian Inference, Graphical Models, Fast Fourier Transform in Computer Graphics

The Johns Hopkins University
Baltimore, MD

B.S., Double Major in Mathematics and Computer Science — *Sep. 2014 - May 2018*

- GPA: 3.87; Computer Science GPA: 3.77
- Dean's List every semester
- **Relevant Coursework:** Computer Vision, Machine Learning, Deep Learning, Approximation Algorithms, Data Structures, Modern Cryptography, Computer Networks, Honors Complex Analysis, Honors Real Analysis, Abstract Algebra, Representation Theory

Experience

Facebook Inc.
Menlo Park, CA

Software Engineer — *August 2019 – Present*

- Applied Machine Learning and Full-stack Engineer on Messenger Kids Growth
- Technologies used: Python, Hack (PHP), SQL, Objective-C, React Native

Facebook Inc.
Seattle, WA

Software Engineer Intern — *Fall 2018*

- Developed a visual real-time debugging pipeline for internal computer vision tools in Objective-C and C++.
- Debug pipeline provided intuitive visualization of CV features and real-time adjustment of parameters in deep CV code with minimal overhead.

Pinterest
San Francisco, CA

Software Engineering Intern — *Summer 2018*

- Developed an extensible human evaluation pipeline for support Search Features at Pinterest
- Created a method to evaluate trending query searches and top autocomplete results in order to filter sensitive content from appearing.
- Used Sofia, an internal interface to Amazon Mechanical Turk for performing human evaluation

Bloomberg LP
New York, NY

Software Engineering Intern — *Summer 2017*

- Developed and prototyped a database system for storing, accessing, and recalculating sets of trade events in order to increase transparency in trading systems.
- Developed in SQL and C++ to interface with database system in Apache Druid to prepare replacement for a production system with more than 20 million trade events per day.

Projects

Unsupervised Detection of Tool Presence in Endoscopic Video
Baltimore, MD

Graduate Student Researcher — *January 2019 – July 2019*

- Accepted at MICCAI CLIP 2020.
- Developed a method for detecting surgical tool presence in endoscopic videos without requiring annotations
- Learned a representation for video frames using a variational autoencoder and performed prediction on representation using Markov chain Monte Carlo and LSTM-based future prediction methods.

Skills

Programming Languages Hack (PHP), Python (PyTorch, OpenCV), SQL, Objective-C, Javascript (React Native), C++

Languages English (native), Chinese (fluent spoken)