Eric Hou

(925) 353-7416 | eric.hou@berkeley.edu | ultraeric.github.io

EDUCATION:

University of California, Berkeley **August 2016 – May 2020**

Major: B.A. Computer Science **Awards:** Regents' and Chancellor's Scholar (top 1.5% of class)

GPA (Major): 3.9 **Competitions:** USACO Silver, USAMO Index 216, USAPhO Semifinalist

Academic Experience: Data Structures, Calculus, Algorithms, Linear Algebra, Statistics, Machine Learning

SKILLS:

OS: UNIX, Windows, Ubuntu **Languages:** Scala, Java, Python, LaTeX, JS, Lua, HTML/CSS, C#

Databases: JDBC, PostgreSQL, MySQL, MongoDB **Servers:** SparkJava, Tomcat, AWS, Node.js, Express.js, IIS

Machine Learning: Torch , TensorFlow **Tools:** Django, Git, Maven, Jekyll, Bootstrap, React.js, Angular.js

EXPERIENCE:

ClickTime - Software Engineering Intern **May 2017 – Present**

- Assisting in the development of the ClickTime REST API and test suites built on the C#, IIS, and .NET stack
- Building and extending core business logic over the entire stack with Angular.js and C#
- Working across multiple divisions to draft, design, and implement predictive business analytics features

Renewable and Appropriate Energy Laboratory - Research Assistant **Sept. 2016 – May 2017**

- Utilizing spatial/linear regression and principal component analysis in QGIS with PostgreSQL and Python
- Developing statistical model for pollution spread and effects of different legislation on pollution

Berkeley AI Research Laboratory - Bin Yu Lab - ML/NLP Research Assistant **Sept. 2016 – March 2017**

- Researching NLP techniques with novel LSTM-based architectures in deep multi-layered neural nets
- Investigating fact-extraction techniques using Google's WikiReadings dataset and the Torch framework

Sumo Logic - Software Engineering Intern **June 2015 – August 2015**

- Created internal web application in Scala for data synchronization across multiple services
- Optimized web application reducing latency and doubling application efficiency

PROJECTS:

Yui-MD - Open Source Material Design Implementation in React.js - React.js, JavaScript, HTML, SASS

- Open-source UI framework implementing Google's Material Design specifications - over 3.5k downloads
- Designed debouncing and queuing algorithms to allow for intelligent, non-blocking updates
- Used higher order component design, allowing for DOM optimization and user-defined components

Python Web Scraper - Python, Requests, Multithreading

- A multi-threaded web scraper written in Python that allows for large-scale distributed scraping
- Allows for lightweight user-defined scraping patterns and recursive, complex scraping patterns

hmwk.io - Information Image Search Tool - Java, MongoDB, Angular.js, Express.js, Node.js, AWS, OpenCV

- Hack submission for CalHacks 3.0, intended to allow users to search for factual information in an image
- Implemented image flattening, normalization, gaussian blur, edge detection, and other algorithms
- Utilized probabilistic model to improve document search built on top of the Bing and Watson APIs

Synapse - Convolutional Neural Network Generator and API - Torch, Lua, Python, Java, Processing

- App that dynamically generates black-box CNNs with built-in training, validation, and testing scripts
- Built-in preprocessing algorithms such as normalization, edge detection, size standardization

JSON Server-Client Framework - Java, Servlets, Apache Tomcat

- Event-driven API for web communication written in Java with Servlet API and Apache Tomcat
- Utilized event loop with asynchronous events and callbacks to serve content dynamically

LEADERSHIP:

Student Government (ASUC), Senator Hemani's Office - Chief of Engineering **May 2017 – Present**

- Working with the Berkeley EECS department, undergraduates, and UC Berkeley administration to expand and improve resource access to EECS/CS undergraduates

Computer Science Undergraduate Association - VP Industry Relations **November 2016 – Present**

- Engaging with companies to host information sessions, tech talks, and hackathons
- Hosting workshops in machine learning and web development to help students explore new areas