

MATTHEW XIE

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EDUCATION

University of California, Berkeley

August 2017—December 2020

BA Computer Science | **GPA: 3.73**

Coursework: Data Structures, Algorithms, Discrete Math and Probability Theory, Data Science, Machine Structures, Designing Information Systems and Devices, Operating Systems*, Databases*, Software Engineering**, Security**

*In Progress **Planned for Spring 2020

Clubs and Activities: Pioneers in Engineering, Berkeley Engineers and Mentors, CS 370 Tutor, AFX Dance

SKILLS

Languages: Python, Java, C, Golang, SQL, HTML/CSS, Ruby/Rails

Technologies: Git, Pandas, Spark, Keras, TensorFlow, Flask, SQLite, Docker, Linux, HPC

EXPERIENCE

Data Science Intern—*Sandia National Laboratories, Livermore, CA*

May 2019—August 2019

- Utilized Python and Apache Spark on Sandia's High Performance Data Analytics clusters to scale up distributed data processing on machine learning tasks and demonstrate big data applications for new users
- Built a convolutional neural network classifier with Spark and Keras for deep learning on tens of thousands of seismic records to distinguish earthquakes from man-made quarry blasts with 97% accuracy and gain actionable insights for future inferences

Data 100 Academic Intern—*UC Berkeley Division of Data Sciences, Berkeley, CA*

January 2019—May 2019

- Assisted a 30 person section on challenging concepts of data science such as Pandas, SQL, classification, and regression during labs, homeworks, and projects

Software Developer—*Pioneers in Engineering, Berkeley, CA*

September 2018—May 2019

- Implemented an internal staff check-in database to keep track of attendance for 200+ members during worksessions using Python, SQLite, and Google Cloud's NoSQL-based Datastore
- Maintained and expanded features for student worksession web app serving 20+ high schools built with Ruby on Rails using Google Sheets API, Slack API, Flask, and Python to check staff availability and automate daily Slack notifications

Engineering Intern—*Lawrence Livermore National Laboratory, Livermore, CA*

June 2018—August 2018

- Automated installation and configuration processes on Linux-based HPC clusters using Ansible
- Collaborated with a team of four to add new functionality to an open-source Python software suite for virtual machine orchestration for LLNL's Livermore Computing division and Systems Administration Group
- Improved efficiency by eliminating the need to control VMs through VMware's ESXi GUI, and presented to industry experts for feedback

PROJECTS

Bloggit (Flask, SQLite)—*github.com/mkxie/bloggit*

April 2019—Present

- Constructed a full-featured Reddit-like blog web application where users can create, update, and destroy accounts and blog posts and interact with each other on the website

Concurrent Cached Filesystem (Go)

April 2019—May 2019

- Implemented Go concurrency on a cached file system for multithreaded execution of file reads from disk and placing files in the cache for faster handling

Spam Email Classification (Python)

October 2018—November 2018

- Created a logistic regression model using Pandas and Scikit-learn with NLP techniques to classify spam vs ham emails with 90% accuracy

Bay Area Maps (Java)

April 2018

- Provided the backend for a Google Maps-like application for the East Bay Area, including zoom capabilities, rendering map images from user queries, and finding shortest routes using A* search algorithm