Kevin Mao

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EDUCATION AND SKILLS

Columbia University School of Engineering **Expected 2021**

- Bachelor of Science in Computer Science, 3.56 GPA (Dean's List)

Technical Skills

- Proficient in Python, JavaScript, Git and familiar with Java, C, Go, HTML, CSS, C, C++

WORK EXPERIENCE

Tulip: *Software Engineering Intern* **Summer 2019**

- Worked on Platform to improve their web-based tool for managing factories using customer feedback
- Enhanced the usability of Tables, a tool that allows customers to manage databases without any code by building new features, such as row deletion, a new datetime type, and real-time data syncing across clients
- Built features using full-stack technologies, ranging from Meteor + Go backend, to React + Redux frontend
- Learned best practice code techniques for working on industrial-sized code bases, like unit testing

Columbia Data Science Institute - Lab for Neural Computing: *Research Intern* **Spring 2018 – Spring 2019**

- Improved machine learning models, including Convolutional Neural Networks and Hidden Markov Models, that were designed to process neural data, using Tensorflow, Keras, and Scikit-Learn
- Optimized model parameters using early stopping and grid search, conducted data signal processing steps, such as PCA and FFT, and ran experiments on a Google Cloud Platform virtual machine
- Achieved 90% and higher model classification accuracy on labeled electroencephalography data sets

NYU Langone Medical Center - Lin Lab: *Research Intern* **Fall 2015 – Spring 2017**

- Discovered a statistically significant correlation between the activation of specific regions in the hypothalamus with aggressive behaviors in mice by conducting behavioral experiments using optogenetics and fiber photometry
- Conducted video annotation and data analysis using MATLAB
- Submitted paper and presented project at Regeneron Student Talent Search and won the Research Report Badge

PROJECTS

LionBase: *Freelance Product Developer* **Spring 2019 - present**

- Helping companies overcome technical challenges by building data-driven applications for their specific needs
- Developed a dashboard to help a music licensing company better manage their database of millions of songs
- Built app in Django and included features such as anomaly detection, searching, and Bokeh data visualizations

Cloud Fitness: *Co-Creator* **Summer 2018 – Fall 2019**

- Helped users try out new gyms by finding and displaying free guest gym passes with this Flask web app
- Designed a dashboard that listed pass links and marked gym locations, data that was collected using web scraping, Microsoft Azure and Google APIs, and was stored in a MongoDB collection for future queries

Paean Health: *Researcher* **Fall 2017 - Spring 2018**

- Tackled the opioid crisis by researching and testing if activated carbon could chemically deactivate medication
- Designed a solution: the X-pouch, a small packet filled with activated carbon that patients could use to deactivate unwanted medication by inserting it into pill bottles, adding water, and shaking to release the carbon
- Presented in a team of 4 and won the Columbia Engineering Design Challenge and $2500 in research funding

LEADERSHIP EXPERIENCE

Columbia Biomedical Engineering Society: *Co-Coordinator of HealthHacks* **Fall 2017 - Present**

- Invited 50+ student developers across the east coast to collaborate on projects that tackled important health issues, such as the opioid crisis and kidney cancer diagnosis, by organizing Columbia's first health hackathon
- Collaborated with a team of 5 by delegating tasks, such as grant applications and marketing to sponsors
- Taught a workshop on web development, provided technical assistance to participants and distributed over $1000 worth of prizes to winners