Kevin Mao

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ACADEMICS AND SKILLS

Columbia University School of Engineering: *Second-year*   **Expected 2021**
- *Bachelor of Science:* Computer Science with Applied Math Minor
- Cumulative GPA: 3.57

Skills: Python, Java, JavaScript, Git/GitHub, HTML, CSS, MatLab, Microsoft Office

PROJECTS

Data@CU: *Software Engineer*   **2018-present**
- Expanding functionality of Data@CU, an API that makes Columbia's dining, housing, and course data more accessible to students, by adding search and better HTTP error handling

CloudFitness.io: *Full Stack Developer*   **2018-present**
- Deployed a scalable web application that helps users find free passes to gyms and fitness centers in their area
- Designed with a Python Flask backend, HTTP requests to gather data, a NoSQL database that stores search results, client-side JS logic, and an API to connect the application's backend and frontend

Paean Health: *Researcher*   **2017-2018**
- Formed Paean Health, a project that won the 2017 Columbia Engineering Design Challenge and was awarded $2,500 in funding, to address the devastating Opioid Crisis
- Prototyped the X-Pouch, a small insert for medication bottles that deactivates unused pills for safe disposal

WORK EXPERIENCE

Columbia Data Science Institute: *Laboratory for Intelligent Imaging and Neural Computing*   **2018-present**
- Developing more generalizable machine learning models in Python-Tensorflow to better understand the brain's data, which was extracted through Electroencephalography
- Studying and applying advanced data processing techniques, such as Principle Component Analysis and Fast Fourier Transform, and models, such as Hidden Markov Models and Convolutional Neural Networks

Columbia University Engineering: *Neurotrauma and Repair Lab*   **2017-2018**
- Researched the molecular mechanisms by which traumatic brain injury leads to cognitive impairments
- Designed experiments to investigate how various enzymes affected mice brain cells using tissue staining analyses

NYU Langone Medical Center: *Lin Lab*   **2015-2017**
- Awarded the Regeneron Student Talent Search Research Report Badge for this research project
- Investigated the hypothalamus's ability to regulate innate social behaviors, such as aggression by using optogenetics and fiber photometry, new technology that can activate and record neurons in real time

College of Staten Island: *Tang Lab*   **Summer 2015**
- Second author of *Paramagnetic effects on the NMR spectra of isotropic bicelles with headgroup modified chelator lipids and metal ions*, which was published in the journal *Physical Chemistry Chemical Physics*
- Analyzed cell membrane structure by using nuclear magnetic resonance spectroscopy

LEADERSHIP EXPERIENCE

Biomedical Engineering Society: *Head Organizer of HealthHacks, Web Developer*   **2017-present**
- Spearheaded HealthHack's mission to teach students about biotechnology by organizing talks about medical devices and teaching workshops about biotechnology, web development, and other tools
- Redesigned the organization's website and created the HealthHacks website

Tech Science Times: *Founder, President*   **2015 -2017**
- Published interesting articles in online science magazine that sparked scientific interest among student body
- Inspired peers to explore their interests in science by leading discussions and mentoring them in technical writing