

# Kevin Mao

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## ACADEMICS AND SKILLS

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### Columbia University School of Engineering: *Second-year*

Expected 2021

- *Bachelor of Science*: Computer Science Major with Applied Math Minor
- Cumulative GPA: 3.57

### Technical Skills

- Proficient in Python, Java, Git/GitHub, Google Cloud Platform, Microsoft Office
- Familiar with JavaScript, HTML, CSS, SQL, MongoDB, MatLab

## PROJECTS

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### Data@CU: *Software Engineer*

2018-present

- Expanding features of Data@CU, an API that makes Columbia's course data accessible to students developers
- Used Python to add course searching, improve HTTP error handling, and implement automatic scraping that updates a SQLite database of courses

### Cloud Fitness: *Full Stack Developer*

2018-present

- Deployed a web application on Heroku that helps users find free passes to gyms and fitness centers in their area
- Designed with a Python Flask backend that finds passes using web scraping and Google Maps APIs, stores them in a MongoDB database, and sends the data to an interactive frontend

### Paeon Health: *Researcher*

2017-2018

- Formed Paeon Health, a project that won the 2017 Columbia Engineering Design Challenge and was awarded \$2,500 in funding, to address the opioid crisis
- Prototyped a small insert for medication bottles that deactivates unused pills by using activated carbon

## WORK EXPERIENCE

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### Columbia Data Science Institute: *Laboratory for Intelligent Imaging and Neural Computing*

2018-present

- Developing more generalizable machine learning models to better understand the brain's signals by using Python's tensorflow, scikit-learn, scipy, and numpy
- Analyzed public datasets and tested model performance using a Google Cloud Platform server
- 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

## LEADERSHIP EXPERIENCE

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### Biomedical Engineering Society: *Co-Director 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