

# Kevin Chen

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## Projects

### Brain Tractography Software (CSD)

07.2019 - Present

- Software translates MRI data into estimated voxels by the constrained spherical deconvolution formula
- Working with graduate students to improve its accuracy using machine learning and auto encoders.
- Brain voxels were obtained by reading text, NifTI, and tessellation files. Implementation done in C language.

### HeartAdvisor Mobile Application

01.2021 - 04.2021

- Takes features such as sleep time, food intake, and air quality to give advice for a healthier heart
- Built in recommendation and includes a database for data retrieval

### Minecraft Semantic Segmentation

08.2020 - 12.2020

- DeepLabV3 model implementation that learns and identifies positioning of blocks/entities
- Player view was segmented using a color map, converting RGB to CIELAB color space
- Validation with k-means elbow method and intersection over union showed excellent learning rate

### Wine Classification By Component Analysis

12.2019 - 03.2020

- Identified classification of wine based on its chemical components
- Eliminated features with univariate selection, recursive elimination, and principal component analysis
- Validated neural network using loss functions, random forest, and decision trees

## Experience

### Undergraduate Research Assistant

06.2019 - Present

UC Irvine - Department of Neurobiology and Behavior

- Researching how neuropsychiatric disorders affect brain connectivity using brain tractography
- Goal is to improve accuracy of models of the intrinsic connectivity of the brain
- Calculations include manipulation of matrices with spherical coordinates

### HTML/CSS Frameworks Instructor

08.2020 - 11.2020

DreamsForSchools - Santa Ana Unified School District

- Introduced 4 classes of students to the fundamentals of HTML/CSS and Bootstrap
- Students designed their own websites which ranged from movie review sites to nail blogs
- Recognized as instructor by J. Luis Correa, a member of the House of Representatives (11.20.2020)

### Mobile App Development Instructor

03.2019 - 06.2019

DreamsForSchools - Carr Intermediate School

- Worked with a class of 40 students to design 8 mobile applications
- Presented applications at an industry exposition featuring Kingston and HyperX
- Students received marks for being best mobile application and giving the best presentation

## Education

### University of California, Irvine

09.2018 - 06.2022

Bachelor of Science, Computer Science  
Bachelor of Science, Neurobiology

AI/Machine Learning

## Skills

### Expertise

AI/Machine Learning, Data Mining, Neurobiology, Data Structures, Algorithm Complexity Analysis

### Technologies

Python, C/C++, Java, R, HTML, CSS, MySQL/noSQL, MIPS Assembly, Swift, MATLAB  
Pytorch, Scikit, Numpy, Matplotlib, Tensorflow, Bootstrap  
Linux, OSX, Windows, MS Office (Word, Excel), Agile

### Certifications

02.2018 - 07.2018

Technical Support Fundamentals Course by Google, [Coursera Credential](#)