Kevin Chen

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Education

University of California, Irvine **9/2018 - 5/2022**

Bachelor of Science, Computer Science - AI/Machine Learning
Bachelor of Science, Biology - Neurobiology

Projects

Constrained Spherical Deconvolution Tractography (CSD) **2019-Present**

Implemented functions that obtain the coefficients of the spherical and rotational harmonics of diffusion tensors. Currently working to generate a delta function to determine voxel direction inside the corpus callosum. Brain voxels were obtained by reading text, NIfTI, and tessellation files. Implementations done in C language.

Minecraft Semantic Segmentation **2020**

Implemented the DeepLabV3 model that learns and identifies structures based on positioning of blocks/entities. Segmentation was achieved using a color map and conversion of RGB to a CIELAB color space. This was validated using intersection over union through 51 epochs.

Feature Selection and Performance Validation on a Wine Dataset **2019**

Identified the classification of a wine (red or white) based on a dataset containing the chemical components of given wines. Feature selection methods were used to eliminate features including univariate selection, recursive feature elimination, and principal component analysis. Model validation was done using neural networks, random forest, and decision trees.

Experience

Undergraduate Research Assistant **6/2019 - Present**

UC Irvine - Department of Neurobiology and Behavior

Researching how neuropsychiatric disorders affect brain connectivity using brain tractography techniques, specifically constrained spherical deconvolution tractography. The algorithm being developed determines the intrinsic connectivity of the brain through a series of spherical and matrix manipulations.

HTML/CSS Frameworks Instructor **8/2020 - 11/2020**

DreamsForSchools - Santa Ana Unified School District

Introduced 4 classes of students to the basics of HTML and CSS including Bootstrap. Students applied this knowledge to design their own websites which ranged from movie review sites to nail blogs. Was given special recognition as an instructor by J. Luis Correa, a member of the House of Representatives for California (11/20/2020).

Mobile App Development Instructor **3/2019 - 6/2019**

DreamsForSchools - Carr Intermediate School

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

Skills and Certifications

Skills

AI/Machine Learning, Graph Theory, Data Mining, Neurobiology

Languages

Python, C, C++, Java, R, HTML, CSS, mySQL, noSQL, MIPS Assembly

Technologies

Scikit, Numpy, Matplotlib, Tensorflow, Bootstrap, Linux, OSX, Windows, Excel

Certifications

Technical Support Fundamentals Course by Google, Coursera Credential