Kevin Huang

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PRINCIPAL INTERESTS

Primarily interested in the use of deep learning in audio processing. Other interests include music information retrieval, natural language processing, and computer graphics.

ACADEMIC BACKGROUND

M.S. Computer Science Sept 2020 - June 2021
University of California San Diego, La Jolla, CA
- BS/MS with emphasis on artificial intelligence.

B.S. Computer Science Sept 2016 - June 2020
University of California San Diego, La Jolla, CA

EMPLOYMENT HISTORY

Teaching Assistant 2012 - Present
University of California San Diego, La Jolla, CA
- TA under the computer science department at UCSD for two quarters
- Responsibilities include preparing for discussion sections, holding office hours, and grading

Tutor April 2018 – March 2020
University of California San Diego, La Jolla, CA
- Tutor under the computer science department at UCSD for seven quarters and two summer sessions
- Responsibilities include holding lab/office hours, grading homeworks and tests, and helping communicate course content to students

Intern June 2018 - September 2018
Webroot Cybersecurity, San Diego, CA
- Summer internship working with a small team of 4 peers to revamp a DNSP agent distribution portal from scratch
- Used an Angular front-end with a Node.js back-end connected to a MySql database

Student Worker Summer 2017
San Joaquin County Office of Education, Stockton, CA
- Helped teach Lego robotics summer camps
- Volunteered throughout the five prior years, which in addition to helping teach after-school and summer classes, helped perform various maintenance tasks around the robotics lab

TEACHING EXPERIENCE

TA

- Fall 2020: CSE 167 - Computer Graphics
- Winter 2021: CSE 169 - Computer Animation

Tutor

- Spring 2018: CSE 140L - Digital Systems Lab
- Fall 2018: CSE 20 - Discrete Math
- Fall 2018: CSE 167 - Computer Graphics
- Winter 2019: CSE 140(L) - Digital Systems
- Spring 2019: CSE 140L - Digital Systems Lab
- Summer 2019 I II: CSE 140 - Digital Systems
- Fall 2019: CSE 167 - Computer Graphics
- Winter 2020: CSE 167 - Computer Graphics

PAPERS

Publications

- S. Dubnov, K. Chen, **K. Huang**. "Deep Music Information Dynamics: Novel Framework for Reduced Neural-Network Music Representation with Applications to MIDI and Audio Analysis and Improvisation," 2021.

Course Related

- "Towards Cross-Cultural Analysis using Music Information Dynamics," for CSE 298 - Independent Study, 2021
- "Sparsity in Nonnegative Matrix Factorization," for CSE 205 - Convex Optimization Algorithms, 2021.
- "Mel2Mel: A C-GAN architecture to improve the quality of parametric singing voice synthesis," for MUS 206 - Experimental Studies Seminar, 2020.
- "Evaluating Frequency-Based Fake Object Detection Models in Practice" for CSE 253 - Neural Networks/Pattern Recognition, 2020.

SKILLS

- Programming Languages: Python, C++, C#, Java, C, Verilog, F#, Javascript
- Libraries: Tensorflow (Keras), PyTorch, OpenGL
- Software: Unity, Blender, Pure Data, Ableton