Kevin Tom

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Education

UNIVERSITY OF MICHIGAN Ann Arbor, MI

B.S.E in Electrical Engineering and Computer Science *Graduating April 2019*

Minor in Mathematics

Selected Coursework: Introduction to Operating Systems · Computer Vision · Introduction to Machine Learning · Web Systems · Database Management Systems · Data Structures & Algorithms · Advanced Calculus · Introduction to Artificial Intelligence

Experience

BLUESTAMP ENGINEERING San Francisco, CA

Computer Science Instructor *June 2017 - August 2018*

- Instructed class of over 30 high schoolers on advanced concepts of C/C++ programming and circuit design
- Worked with other instructors to implement an educational syllabus for future students as a step by step process on how to get started in computer science, electrical engineering, and mechanical engineering
- Led test-driven development to reduce development time by about 25%
- Updated project resources to be better understood by students such as converting to conda as a package management system and adding comments in provided source code
- Guided students in arduino and Raspberry Pi development leading to successful implementation of their personal projects, such as an drum sequencer, red tracking robot, and a bluetooth controlled 3D hand
- Co-hosted discussions with industry professionals to expose student to different engineering fields and foster an entrepreneurial spirit

MVCODE CLUB San Francisco, CA

Computer Science Instructor *May 2017 - Sept 2018*

- Instructed multiple classes of over 15 students on basic concepts of Javascript, Scratch, Unity, and Arduino programming
- Lead camps on Javascript game design and RC robots resulting in the completion of snake games and bluetooth controlled cars
- Taught students how to read ScriptCraft documentation for developing Minecraft plugins, giving students the knowledge to spawn custom mobs, create a teleport function, and craft items with new effects
- Worked with special needs students to achieve classroom objectives with a focus on personal goals

Projects

LED Visualizer *Arduino*

- Implemented a frequency to voltage circuit that took in live audio and created numerical representation of a sine wave that could be interpreted by the Arduino
- Developed an algorithm that takes in the values read in by the Arduino by mapping the frequency to color, volume to animation, and potentiometer values to brightness.

Shape From Shading *Kaggle Challenge*

- Worked in a team to develop a system to predict surface normals given a single image by training a set of labeled images over a neural network
- Implemented a hourglass network architecture using a combination of convolutional, max pooling, and RELU layers resulting in a colorized grey-scale image based on predicted normals

False Images *Tensorflow*

- Trained two neural networks, one generator and one discriminator, on each other so that the images outputted by the generator would be identified as a false image
- Implemented CycleGAN(Generative Adversarial Network) to create a mapping between two classes of images generating new imgaes from a new input image

Image Hosting Website *Web App*

- Implemented a web application that allowed users to sign up and store images onto their accounts
- Extensive use of Python, Javascript, and HTML to build and connect the front and back end of the web pages
- Organized a database using mySQL to control what could be seen by certain users based on the privacy settings of a photo album

Skills

- Proficient Languages: C++, Python, Matlab
- Experience Using: Javascript, Java, mySQL, HTML, C#, LaTeX
- Tehchnologies: Git, Tensorflow, Arduino