





KEVIN TOM

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EDUCATION

UNIVERSITY OF MICHIGAN

B.S.E in Electrical Engineering and Computer Science

Minor in Mathematics

Ann Arbor, MI

Graduating April 2019

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

EXPERIENCE

BLUESTAMP ENGINEERING

Computer Science Instructor

San Francisco, CA

June 2017 - August 2017

- Instructed class of over 20 high schoolers on advanced concepts of C++ programming and circuit design
- Led test-driven development to reduce development time by about 25%
- Guided students in arduino development leading to successful implementation of their personal projects, such as an omni-directional robot, multi-leveled safe, and a 3D printed hand with 6 degrees of freedom
- Co-hosted discussions with industry professionals to expose student to different engineering fields and foster an entrepreneurial spirit

MVCODE CLUB

Computer Science Instructor

San Francisco, CA

May 2017 - Sept 2017

- 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

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 images from a new input image

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

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

Image Stitching *Computer Vision*

- Implemented a image stitching program using the Harris Corner Detection algorithm to find corners determining the correct orientation to combine photos by calculating the maximum number of matching corners vs. the minimum number of mismatched corners

SKILLS

- Proficient Languages: C++, Python, Matlab
- Experience Using: Javascript, Java, MySQL, HTML, C#, L^AT_EX
- Technologies: Git, Tensorflow, Arduino