YIFAN GONG

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EDUCATION

The University of Texas at Austin May 2019
Master of Science in Information Science/Studies (3.9/4 GPA)

Hunan University, China Oct 2016
Bachelor of Engineering in Computer Engineering (Digital Media Technology) (85/100 GPA)
Exchange program at Arizona State University (China Scholarship Council Excellence Scholarship)

EXPERIENCE

The University of Texas at Austin - Development and Immersive Reality Lab Austin, TX
Scripter, Graduate Research Assistant Jan 2019 - June 2019

- Developed a VR experiment platform to generate virtual characters in a virtual environment using Oculus Integration package in **Unity** and to find children's responses to virtual characters in different sizes.
- Developed three mode interactions based on user's selections, implemented Fisher-Yates shuffle algorithm to randomize the spots to generate characters, coded to scale characters over time and make them face to the user using **C#**.
- Fetched data from VR equipment and write data to .csv file, developed UI interfaces to login, added animation to characters in **Unity**, version control using **Git**.

SKILLS

Languages: Java, Python, C#, JavaScript, C/C++, SQL, HTML, CSS
Platforms and Tools: Linux, TensorFlow, Weka, Unity3D, Android, Flask, Photoshop, Illustrator, Tableau, Git

PROJECTS

Enhancing Touch Interactions with Passive Finger Acoustics - Android Application Development

- Developed mobile drawing sound interactive app using **machine learning** method with back-end sound recognition algorithm. Master's Report
- Led **Android** development using **Java**, implemented real-time knock sound detection and feature extraction using TarsosDSP toolkits, built/validated/deployed pre-trained machine learning random forest model with 91% accurate rate on Android device using Weka, developed UI in Android native app.

Recipe Search System Using Image Recognition of Food Ingredients - Web Application Development

- Developed a recipe search system using **machine learning** methods to recognize food ingredients in the image. Received Best Project Awarded by popular vote
- Designed Convolutional Neural Network (CNN) models to recognize food ingredients images using **Python**, TensorFlow and Keras with 62.9% accurate rate.
- Built a dataset using ImageNet, tested various machine learning models on the dataset, connected machine learning model with a front-end interface using **Flask**.

Crowdsourcing for Computer Vision - Full Stack Development

- Designed experiments to test the efficiency of crowdsourcing tasks to annotate objects in images for dataset to train machine learning algorithm.
- Developed salient object annotation task in Amazon Mechanical Turk using **HTML/CSS/JavaScript** to collect data from crowdsourced humans, analyzed data using **Python** and proved that highlighting the salient object can improve annotation efficiency.

Meditation Gallery - Android Game Development

- Developed a VR game on Android in Unity using Google VR SDK to teach meditation and fine art knowledge, including functionality to allow users to teleport and interact with objects.

Kinect-Based Air Writing and Character Recognition - Back End Development

- Utilized Kinect, OpenNI, OpenCV and K-Nearest Neighbors (KNN) algorithm using **C++** to recognize numbers hand written and hand gestures in the air.