# CHENHAO LI

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## **EDUCATION**

Shanghai Jiao Tong University

Shanghai, China Projected to learn: Master of Science in Software Engineering Sept. 2020 - Present

GPA: 3.58/4.0

**University of Michigan** Ann Arbor, USA

Bachelor of Science in Computer Science Engineering Sept. 2018 - May 2020

GPA: 3.95/4.0

**Shanghai Jiao Tong University** Shanghai, China

Bachelor of Science in Electronic and Computer Engineering Sept. 2016 - Aug. 2018

GPA: 3.6/4.0

### **EXPERIENCE**

#### Web App: COP15 Virtual Exhibition for Shanghai

Technical Programmer Aug. 2021 - Oct. 2021

Rapidly implemented 3D virtual exhibition for web based on Unity

- Implemented logics for exhibition of various stages and implemented UI interactions
- Implemented smooth curve motion and view change of camera
- Applied memory optimization techniques to fit mobile environment and went online in October

#### **Research: Expression Motion Stylizing for 2D Human Face**

Shanghai, China Mar. 2021 - Jun. 2021

Shanghai, China

Technical Programmer

Implemented 2D facial expression transfer with styleGAN and First Order Motion models

- Collected Disney characters facial expression data and Apply styleGAN model to generate stylized facial images
- Trained and apply First Order Motion Model to transfer facial expression from videos to images
- Applied train idea of GAN network to capture "expression style" based on First Order Motion model

#### Research: 3D Face Model Deformer based on Deep Learning

Shanghai, China

Technical Programmer

Sept. 2020 - Jan. 2021

- Implemented a face model deformer based on deep differential subspace reconstruction
- Designed deep neural network to train model deformer given input rig parameters and output target expression
- Implemented reconstruction algorithm to re-generate facial model based on output of neural network

# Game Development: Xtraction Point

Ann Arbor, USA

Team Leader & Main Programmer

Oct. 2019 – Jan. 2020

- Designed a game of adventure genre and lead a group of four
- Implemented and designed enemy, scene assets mechanics, level progress and pixel art animations
- Attended Game Design showcase of UM Fall 2019 and achieved 7th/32 for audience voting

#### Research: Variant Calling for Genomics Alignment

Ann Arbor, USA

Research Assistant & Software Programmer

Jan. 2019 – Aug. 2019

- Improved software acceleration for DNA alignment and tested CPU time on core algorithm
- Design corresponding algorithm for fixed point calculation to output the same correct results
- Improve time performance of new algorithm on FPGA board to three times to original version

### **Coursework & Projects**

Sept. 2018 – Present

- Android App: Design and development of Map application showing salinity data for water source
- Software Engineering: Design and development of medical image processing software
- UI Design: Design and Implementation of Vscode extension Numpy Helper
- Web Systems: Design and Implementation of client/server dynamic pages
- Computer Vision: Cancer segmentation for lung images, Implementation and test of Faster R-CNN model
- Game Design: Implementation of Zelda I Dungeon and Design of game Gemini
- Machine Learning: Application of SVM and CNN, Image Style transfer with StyleGAN model

# **ACHIEVEMENTS**

Dean List of University of Michigan, CSE department Dec. 2018 - Feb. 2020

First Prize in Game Jam by Wolverine Soft, University of Michigan Nov. 2019

Dean List of Joint Institute of SJTU-UM, Shanghai Jiao Tong University Dec. 2016 - Feb. 2018

Scholarship for excellent undergraduates, Shanghai Jiao Tong University Dec. 2017 - Feb. 2018

Wu Jong-Sun Jie Scolarship for JI excellent student Sept. 2016 – May 2017