

# CHENGUANG(Simon) DENG

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## EDUCATION

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**Entertaining Technology Center, Carnegie Mellon University** *Pittsburgh, PA*  
*Master of Entertaining Technology (Computer Graphics), QPA:3.95/4.0* Aug. 2021 - May. 2023

**School of Information Science and Technology, ShanghaiTech University** *Shanghai, China*  
*Bachelor of Engineering in Computer Science and Technology* Aug. 2016 - Jul. 2020  
Course areas: Database and Data Mining, Computer Vision(Machine Learning), Computer Graphics, Robotics, Algorithms, Software Development, Operating System

**University of California, Berkeley** *Berkeley, CA*  
*Summer Session, Film Production for Dance and Movement* Jul. 2019 - Aug. 2019

## WORKING EXPERIENCES

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**Lilith Games** Jun. 2021 - Sept. 2021  
*Algorithm Engineer Intern* | Python · OpenCV · Pytorch

- Researched on building a automatic workflow from videos to animation with a given avatar using motion capture and skeleton retargeting by deep learning methods of machine learning
- Researched on emotion modeling and completed an implementation of virtual pet which have numerical simulated basic system of body including digest system, circulatory system that affects spontaneous behaviour

**ShanghaiTech University & Esquel Group** Jul. 2020 - Jun. 2021  
*Research Assistant* | Python · ROS · OpenCV · Arduino · Software Development · Hardware design

- Helped in developing object detection model on Husky mobile platform with robot arm, aimed to detect cotton buds on plant in production environment based on first sea island cotton image database we collected in field
- Iterated designs of suction device and implemented the control software of motor with Arduino
- Ranked second in University's Innovation and Entrepreneurship Competition and won Viewer's Choice

## RESEARCH & PROJECTS

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**trAIIn & gAIIn: How Neural Network controls Self-driving Car** Feb. 2022 - Mar. 2022  
*Client: Boys & Girls Clubs of America* | *Programmer* | C# · Unity · WebGL

- Coded an WebGL game project focusing on interactively expressing neural networks and neurons to teenagers without AI background, which substitutes related course material of Boys & Girls Club of America.

**Analysis of the Mechanism of Economic Uncertainty affects Venture Capital Investments** Jun. 2019 - Jun.2020  
*School of Entrepreneurship and Management, ShanghaiTech* | *Student Research Assistant* | Python · STATA · SQL

- Cleaned and preprocessed data from Pitchbook.com, extracting features through empirical methods to standardize raw dataset using Python and STATA
- Analyzed and visualized global venture capital investment trends and correlations to economic policy uncertainty
- Applied regression models to controlled variables to uncover correlation and mechanism between venture capital investment behavior and uncertainty index in investor's gender, age, and education level

## SKILLS

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**Programming Language:** Python, C#, C/C++, MATLAB, Rust, MIPS, Java  
**Software:** SQL, STATA, Pytorch, OpenCV, OpenGL, ROS, Git, Perforce, Springboot, HTML/CSS  
**Hardware:** Microsoft Hololens, Oculus Quest, Tobii Eye tracker, Vive Tracker, Arduino  
**Creativity:** Unity, Final Cut Pro, Adobe Photoshop, Adobe Premiere, FL Studio, Synthesizer V  
**Specialty:** Electronic Organ (Amateur grade 10 certificated), Chinese Calligraphy  
**Language:** Mandarin (Native), English (Fluent), Japanese (Basic), Spanish (Basic)