

Jiacheng Chen

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Education

- 2016-Present **Simon Fraser University**, *Bunarby*, BC, Canada.
B.Sc in Computing Science, Dual Degree Program, GPA: 4.17/4.33
- 2014-Present **Zhejiang University**, *Hangzhou*, Zhejiang, China.
B.Sc in Computer Science and Technology, GPA: 3.93/4.0

Publication and Preprints

- 2018 **Probabilistic Neural Programmed Networks for Scene Generation**,
Zhiwei Deng, [Jiacheng Chen](#), Yifang Fu, Greg Mori,
NIPS'2018 (spotlight).
- 2018 **Adaptive Appearance Rendering**,
Mengyao Zhai, Ruizhi Deng, [Jiacheng Chen](#), Lei Chen, Zhiwei Deng, Greg Mori,
BMVC'2018.
- 2018 **Scalable Distributed Visual Computing for Line-Rate Video Streams**,
Chen Song*, [Jiacheng Chen](#)*, Ryan Shea, Andy Sun, Jiangchuan Liu,
ACM MMSys'18.
- 2017 **Learning to Forecast Videos of Human Activity with Multi-granularity Models and Adaptive Rendering**,
Mengyao Zhai, [Jiacheng Chen](#), Ruizhi Deng, Ligeng Zhu, Lei Chen and Greg Mori,
ArXiv Preprint.

Research Experience

- June 2018- **Research Assistant**,
VML Lab, Simon Fraser University, Advisor: Prof. Yasutaka Furukawa.
Research on indoor reconstruction and scene understanding
- May 2017- **Research Assistant**,
VML Lab, Simon Fraser University, Advisor: Prof. Greg Mori.
Research on generative models, image/video understanding and synthesis
- Sept 2017 - **Research Assistant**,
May 2018 *Big Data Research Project*, Simon Fraser University, Advisor: Prof. Ryan Shea.
Research on distributed computing system integrated with computer vision

Honours and Awards

- 2017 **Meritorious Prize**, *Mathematical Contest in Modeling (MCM)*.
Top 7% in all participants of the competition
- 2017 **First Class Entrance Scholarship**, *Simon Fraser University*.
The scholarship rewards top 10% students in SFU-ZJU Dual Degree Program

- 2016 **First Prize Academic Scholarship, Zhejiang University.**
The scholarship rewards the top 5% student according to academic behavior

Selected Projects

- April 2017 **Action Recognition Exploration, [Github link](#).**
- Explored and Implemented a bunch of popular deep-learning-based human action recognition models including two-stream CNN(RGB and Optical Flow), C3D, LRCN, etc.
 - Implemented a Web app in which local and online videos can be imported and recognized.
- Dec 2016 **Color-Consistent Vegetable Classifier.**
- Trained a CNN classifier based on pre-trained ResNet-50 model for identifying among 50 different kinds of fruits and vegetables with over 60% top-1 accuracy
 - Applied a logarithmic preprocessing technique to enhance the model's stability under different light environments
 - Implemented a web application for the classifier with Django to make it both accessible for desktop and mobile users
- Oct 2016 **Basic Shell, [Github link](#).**
- Implemented a shell(for Linux) with C and system calls which simulates the functionality of bash
 - Implemented pipe using inter-process communication to make the shell support complex and integrated commands
- Sept 2016 **SFU Wechat Assistant, [Github link](#).**
- Built up a Wechat intelligent assistant for reporting SFU calendar automatically by sending notifications about classes and other important events
 - Deployed the assistant on our VPS and made it accessible to everyone who subscribes our public Wechat account
- June 2016 **MiniSQL, [Github link](#).**
- Designed a mini database system using Python and successfully passed MySQL-based test cases
 - Conducted unit test on core modules with automatic testing tools to maintain the quality of the code
 - Implemented a SQL interpreter with PLY and Backus Normal Form to parse SQL language
- Feb 2016 **FPGA Greedy Snake Game.**
- Implemented the classic greedy snake game on FPGA using Verilog HDL
 - Created different patterns by plotting bitmaps to prettify the game with the theme of Pac-Man
 - Designed algorithms based on geometrical principles for controlling the shape of snake while moving and rotating