

# Yijun Liu

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## Education

### University of Southern California, Los Angeles, CA

Ph.D. in Electrical Engineering *Aug.2018-Present*

### Cornell University, Ithaca, NY

M.Eng. in Electrical and Computer Engineering GPA: 4.0/4.3 *Aug.2016-Dec.2017*

### Soochow University, Suzhou, Jiangsu, China

B.Eng. in Communication Engineering GPA: 3.74/4.00 *Aug.2012-Jul.2016*

## Experiences

### Data Scientist, Grubhub Inc., New York, NY

*Mar.2018-Jul.2018*

- Developed, evaluated and analyzed menu-item recommendation system
- Tools: Apache Spark, Python

### Software Development Intern, Grubhub Inc., New York, NY

*Jun.2017-Aug.2017*

- Built and experimented with an image search pipeline of object detection, index, query, and evaluation
- Achieved precision@5 with 0.64, precision@15 with 0.77 on Food-11 dataset
- Tools: Python, Shell Scripting, OpenCV, Theano, Keras, Google Vision

### Software Engineering Intern, Bosch Automotive Products, Suzhou, China

*Oct.2015-Mar.2016*

- Implemented project selection, resource information filling features for a budget controlling system
- Managed data in the system's database using SQL Server
- Tools: Java, JavaScript, CSS, HTML, SQL

## Conference Presentations

- **U-Net for Pancreas Segmentation in Abdominal CT Scans**, Y. Liu, S. Liu. *IEEE International Symposium on Biomedical Imaging (ISBI)*, 2018.
- **Log-Periodic Antenna with Interdigital Structure for Energy Harvesting from TV Broadcast Tower**, Y. Liu, X. Liu, X. Yang, D. Xie. *IEEE Asia-Pacific Microwave Conference (APMC)*, 2015.

## Selected Projects

### Fully Convolutional Neural Network for Pancreas Segmentation

*Oct.2017-Jan.2018*

- Implemented and experimented with 2D and 3D FCNs plus preprocessing and validation steps
- Beat existing results with mean DSC of 86.7% on NIH dataset with U-Net trained from scratch
- Tools: Python, Tensorflow, Keras

### Heart Ventricle Separation in Low-dose CT Scans

*Oct.2016-May 2017*

- Developed a system to automatically delineate the interventricular septum in low-dose CT
- Applied registration and surface fitting to construct and visualize the septum wall
- Tools: C, Shell Scripting, Python, R

### Detection of Micro-Aneurysms in Fundus Images

*Oct.2016-Nov.2016*

- Developed a system to automatically annotate micro-aneurysms based on profile analysis
- Implemented candidate selection, feature engineering, and non-maximum suppression
- Tools: C, Shell Scripting

## Selected Honors and Awards

- Second Prize in Columbia University Health Hackathon *Apr. 2018*
- Best Poster Award in Bio-signal track in Cornell ECE MEng Project Poster Session *May 2017*
- Jiangsu Province Merit Student Award *May 2016*
- Second Prize in Jiangsu Province Electronic Design Contest *Aug. 2014*
- National Scholarship of China (3.7%) *Nov. 2013*