

# Li Wei

Software Engineer at Google | Computer Vision + Mobile Platform

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## Summary

N/A

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## Experience

### Software Engineer at Google

February 2017 - Present

Better Camera for Google Pixel Phone.

### Research Assistant at University of Houston

June 2014 - December 2016 (2 years 7 months)

Fall 2015:

Human activity recognition using contextual information by deep neural network.

Fall 2014~Spring 2015:

Computer Vision Human Group Tracking: Using Computer Vision Technology to discover and track the groups of humans in video, and recognize the activities of groups for automatic video surveillance application.

Summer 2014:

Multi-Subject Motion Capture Project. Design and setup arrangement of 10 Vicon MX cameras for 3-subject conversation (facial and upper body) motion capture

### Software Engineer Internship at Google

May 2016 - August 2016 (4 months)

- Work with Android Camera Machine Intelligence team on Cinemagraph creation on mobile device.
- Optimize the animation creation pipeline for better performance on mobile devices.
- Integrate Cinemagraph pipeline into Android Smartburst.

### Software Engineer Internship at Google

May 2015 - August 2015 (4 months)

Worked at Google Photos on automatic Cienmagraph animation creation from video. Filed one patent through this project.

- Video decoding (FFMpeg on Android) and stabilize/crop the hand-holed recoded videos.
- Discover the animation parts in video scene using optical magnitude.
- Generate smooth loops locally in video animation parts and encode animations into a .gif file.

- Submit around 20 change lists into Google code repository. Got familiar with industry software development pipeline (coding/designing style, creating unit-tests, doing code review).

### **Teaching Assistance at University of Houston**

August 2012 - June 2014 (1 year 11 months)

Fall 2012: COSC 1410 - Introduction of Computer Science, TA, Lecture

Spring 2013: COSC 6308 - Computer Architecture, TA

Fall 2013: COSC 3330 - Computer Architecture, TA, Lecture

Spring 2014: COSC 6309 - Introduction to Automata and Computability, TA

### **Software Engineering Intern at Qualcomm**

June 2013 - August 2013 (3 months)

Work in Qualcomm multi-media research group, built a live speech driven facial animation system. Submitted 2 patents through this project.

1. Implement live speech animation system from scratch, in C++ and OpenGL. Use Boost library for audio/animation synchronization, build the user interface using QT.
2. Facial motion data compression using Principal Component Analysis. Motion segments labeling using K-Mean clustering. Motion data denoise using Low-Pass Filter.
3. Off-line speech audio recognition using HTK. Set up the live phoneme recognition using JULIUS

### **Software Engineering Intern**

May 2012 - August 2012 (4 months)

Joined the Huanshi Network Technology, worked on 3D facial construction project.

1. Developing video-based human face model 3D reconstruction prototype from scratch in C++.
2. Implement RBF algorithm and develop user interface system to let artists generate face database.
3. Building 3d model re-construction pipeline using OpenCV, and Morphable Model with face database.
4. Find the facial feature points correspondence among video frames using FLANN.
5. Use Active Appearance Model to track the facial features in video stream of mobile phone, and synthesis realistic facial texture using Laplacian Operation and Harmonic Field.

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## **Education**

### **University of Houston**

Doctor of Philosophy (Ph.D.), Computer Science, 2012 - 2016

### **Xiamen University**

Master of Engineering (MEng), Systems Engineering, 2009 - 2012

### **Xiamen University**

Bachelor of Engineering (BEng), Automation Engineer Technology/Technician, 2005 - 2009

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## **Honors and Awards**

Best Junior PhD Student Award

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[Contact Li on LinkedIn](#)