# XIANG LIU

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## OBJECTIVE

Seeking a Software Development Engineering Intern position in Amazon utilizing professional skills in web development.

## EDUCATION

**University of Michigan, Ann Arbor, MI**
*Master of Electrical and Computer Engineering* *May 2018*
Coursework: Web Database & Information Systems; Introduction to Algorithm

**Zhejiang University, Hangzhou, China**
*Bachelor of Science in Information and Communication Engineering* *July 2016*
Coursework: Data structure & Algorithm; Intro to Computer Organization GPA: 3.77/4

## EXPERIENCE

**SecNeo Security Service Co.** Hangzhou, China
*Web Engineering Intern* *September 2015-November 2015*

- Designed a web crawler in **Python** to monitor Android app status information
- Monitored illegal download and track download URLs

## PROJECT EXPERIENCE

**University of Michigan** Ann Arbor, MI
*Web development projects for EECS 485* *September2016-present*

- Developed a photo album website with python in the server side and **HTML/JavaScript** on client side. Build a database for the album website with **MySQL**. Implemented user authentication and used sessions to maintain state from pages.
- Created a common interface (the API) in backend which is used simultaneously by frontend web applications, mobile applications. Client-side will fetch data in the backend using **AJAX** and insert data into page dynamically.
- Implemented a single machine, multi-process, multi-threaded MapReduce server in python. Master process will listen for the job, distribute work among workers and handle fault tolerance. Worker will perform the task given by Master.
- Built an integrated search engine with information retrieval based on tf-idf and PageRank scores. Used Hadoop library to implement large file indexing with MapReduce.

**Zhejiang University** Hangzhou, China
*Android App Developer* *March 2015-July 2015*

- Developed an **Android** DJI drone app as a ground station control system
- Implemented drone real-time user self-tracking system. Drone would follow user's move with the speed and location information provided by user and return the video in real-time. These features went beyond the official ground station in mobile platform at that time and helped DJI to optimize their ground station application
- Won *Second Prize* in DJI App developer competition

**University of Michigan** Ann Arbor, MI
*Undergraduate Research Assistant* *July 2015-September 2015*

- Designed a software-based radio system by using GNU Radio and **Python.** Developed a high level flow graph so that transmitter and receiver could work in duplex mode
- Custom designed blocks to implement parameterized pulse-position modulation that reduced system power requirement. Implemented a predefined header which could evoke the receiver when needed.
- Customized USRP FPGA RX signal path and implemented real time packet detection. User could use this system to test their chips with customized signal

**Zhejiang University** Hangzhou, China
*Undergraduate Research Assistant* *Jan 2015-March 2015*

- Implemented a webcam-based real-time human gaze tracking. Use gradient-based Hough transform to pupil localization and modified the key parameters in Gaussian filter; Optimized the threshold value to accurate result.
- Applied orthogonal face detectors to preclude noise region. Improve minimal tracking recognition range to 15 $cm^2$

## COMPUTER SKILLS

Platforms: Windows, Linux/Unix
Languages: C++, Java, Python, MySQL, JavaScript, HTML, MATLAB, Verilog