

# Yiyun Yao (Tony)

## ■ Education

**Carnegie Mellon University**, *M.S. in Information Networking*, Pittsburgh, 2016.08 - 2018.05.

◦ QPA: 3.67/4.0, Courses: Algorithm, (Advanced) Cloud Computing, Computer Graphics, Web Apps Development

**Southeast University**, *B.E. in Software Engineering*, Nanjing, 2012.09 - 2016.06.

◦ QPA: 3.73/4.0, Rank: 1<sup>st</sup>/137, Course: Compilers, Computer Networks, Data Structures, Operating Systems, Software Engineering

## ■ Skills

C, C++, Java, Python, Django, git, HTML, CSS, JavaScript, Angular.js, C#, SQL, Hadoop, Spark, Shell, Scala

## ■ Internship

**Google**, *Android WebView Team*, Software Engineering Intern, Mountain View, 2017.05 - 2017.08.

- Worked on Java layer of Android WebView to enable *Finch*, a server-controlled A/B testing framework in Chrome
- Created a data-fetching service based on *JobService* to reduce battery and memory overhead on mobile devices
- Developed a configuration service to share test seed data with all WebViews on the system to reduce data usage
- Introduced a new Android WebView platform on the *Finch Server*, which test designers can specify as a target platform

**Microsoft**, *Visual Studio Team*, Software Engineering Intern, Shanghai, 2015.07 - 2016.01.

- Built a simple and intuitive front-end management portal based on *AngularJS* which improves usability
- Developed a local preview command line tool in *C#* to let user view their final generated documentation locally

**G1Game Network Technology Co., Ltd.**, Software Engineering Intern, Shanghai, 2014.07 - 2014.08.

- Developed *Android* version of the game and built a user metrics analysis system to collect real-time logs and crash reports

## ■ Projects

**Miller's Hollow Online**, *Best Course Project for Web Apps Dev*, Team Leader, Pittsburgh, 2016.09 - 2016.12.

- Built a website to let people play offline board game *Werewolves of Miller's Hollow* in the browser using video call
- Develop a video call communication mechanism which supports 9 people playing together using *WebRTC*
- Implemented a complete set of game logic and real-time asynchronous updates of the web UI using *jQuery* and *WebSocket*

**Twitter Analytics Web Service**, *Team Project for Cloud Computing*, Pittsburgh, 2016.09 - 2016.12.

- Built a performant *RESTful* web service on AWS cloud for 4 different queries to more than 1 TB Twitter user and tweet data
- Processed original data using *MapReduce* and stored them in both *MySQL* and *HBase* with separately designed schema
- Developed front-end services based on *Java Servlet* and *Elastic Load Balancer* making 8 instances work together by replication
- Achieved over 150% qualified requests/second throughput on the mixed query with \$0.95/hour budget on AWS cloud

**Heterogeneity-aware Job Scheduler**, *Project for Advanced Cloud Computing*, Pittsburgh, 2017.04 - 2017.05.

- Built a scheduler based on *Apache YARN* to maximize utility for jobs with different types and different start times
- Scheduled jobs based a normalized quantitative indicator related to factors like estimated running time and free machines
- Achieved top 10 percent on two hidden tests, showing stability under repeated tests

**HackShanghai**, (2<sup>nd</sup>/60) in the largest 24-hour hackathon in China, Team Leader, Shanghai, 2014.11.15 - 11.17.

- Proposed a solution to let people use smart phones as remote control to view online videos in the browser
- Developed a Chrome extension to search videos based on user interests and organize them into watch lists with a clear UI
- Built an Android app to recognize user touch or hand gestures and send the operations to the extension through *WebSocket*

**Shaiguoguo: Live Stream Platform**, (3<sup>rd</sup>/35) in College, Team Leader, Nanjing, 2014.08 - 2014.09.

- Created a website to let people open their own video streams on the Internet and share streams with anyone using a browser
- Developed highly-modular and reusable components based on *AngularJS* to make front-end code clean and maintainable
- Built the front-end, interacting with the *RESTful* back-end with only *JSON*, to compartmentalize the design

**LyePop: Instant Messenger**, (1<sup>st</sup>/35) in College, Full Stack Developer, Nanjing, 2013.08 - 2013.09.

- Built a multi-threading client using *GTK* and *pthread* to prevent threads of other components from blocking the GUI
- Designed and implemented a peer-to-peer communication mechanism among users to reduce the load on the server

**Regular Expression Visualization**, *Best Course Project for Compiler*, Nanjing, 2014.11 - 2014.12.

- Developed a website to visualize three forms of automata(NFA/DFA/min-DFA) for regex in state machine diagrams