Yiyun Yao (Tony)

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• Education

Carnegie Mellon University, *M.S. in Information Networking*,   Pittsburgh, 2016.08 - 2018.05.
- Cumulative GPA: 3.67/4.0
- Courses: Algorithm Analysis, Computer Graphics, (Advanced) Cloud Computing, Web Application Development

Southeast University, *B.E. in Software Engineering*,   Nanjing, 2012.09 - 2016.06.
- Cumulative GPA: 3.73/4.0, Rank: 1st/137, Google Excellence Scholarship: 1/60 in China
- Courses: Linear Algebra, Data Structure, Software Engineering, Operating System, Computer Network, Compiler

• Internship

Google, *Android WebView Team*, Software Engineer Intern,   Mountain View, 2017.05 - 2017.08.
- Add *Finch*, a server-controlled A/B testing framework in Chrome, to Android WebView
- Create the *Finch Configuration Service* to download the test seed for all WebViews which reduces the data transferred on mobile devices
- Design the service based on new *JobService* API which guaranteed to get the job done and reduce the overhead on memory and battery
- Introduce a new platform to the *Finch Server*, by which the test providers can specify Android WebView as a target testing platform
- Update the User Metrics Analysis platform for Android WebView Team to activate data visualization for *Finch*

Microsoft, *Visual Studio Team*, Software Engineer Intern,   Shanghai, 2015.07 - 2016.01.
- Build *OpenPublish* system to convert markdowns documentation into highly-customized web pages and auto deploy them to websites
- Develop a simple and intuitive front-end management portal based on *AngularJS* which improves the usability compare to the old one
- Program a local preview tool for documentation in both *Python* (for rapid prototype in 3 days) and *C#* (for code maintainability)

G1Game Network Technology Co., Ltd., Software Engineer Intern,   Shanghai, 2014.07 - 2014.08.
- Create a MMORPG mobile game based on *Cocos2d*, once ranked 12th in the App Store paid app list
- Develop *Android* version of the game and build 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***, Tech Lead,   Pittsburgh, 2016.09 - 2016.12.
- Miller's Hollow Online allows people to play offline board game *Werewolves of Miller's Hollow* in the browser using video call
- Develop video call communication mechanism which supports at most 9 people playing together using *WebRTC*
- Implement a complete-set of game logic and real-time asynchronous updates of web UI using vanilla *JavaScript*, *jQuery* and *WebSocket*

Twitter Analytics Web Service, *Team Project for **Cloud Computing***, Tech Lead,   Pittsburgh, 2016.09 - 2016.12.
- Build a performant *RESTful* web service on AWS cloud for 4 different queries to more than 1 TB Twitter user data and tweet data
- Process original data using *MapReduce* and store them in both *MySQL* and *HBase* with separate designed schema
- Develop the front-end services based on *Java Servlet* and *Elastic Load Balancer* making 8 instance work together by replication
- Achieve 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.
- Build a scheduler based on *Apache YARN* for scheduling jobs with different types and different start time to maximize utility
- Design the scheduling policy by sorting the jobs by a normalized quantitative indicator related to factors like estimated running time
- Achieve over qualified utility on three released tests and top 10 percent on two hidden tests, showing stability under repeated tests

HackShanghai, (2nd/60) *in the largest 24-hour hackathon in China*, Tech Lead,   Shanghai, 2014.11.15 - 11.17.
- ***Project Chrome Theater*** allows people to use smart phones as remote controllers to view online videos in the browser
- Program a Chrome extension to collect videos from Youku based on user interests and organize them into watch lists with beautiful UI
- Develop an Android app to recognize user touch or hand gesture and send the operations to the extension through *WebSocket*
- Present *Chrome Theater* off the cuff to over 400 audiences and receive great feedback from sponsors and experts in the industry

Shaiguo: Live Stream Platform, (3rd/35) *in College*, Tech Lead,   Nanjing, 2014.08 - 2014.09.
- Shaiguo allows people to open their own streams on the Internet and share streams with anyone using a browser
- Develop high-modularized and reusable components based on *AngularJS* to make front-end code clean and maintainable
- Develop the front-end interacting with the *RESTful* back-end only by *JSON* to achieve a clear division in engineering

LyePop: Instant Messenger, (1st/35) *in College*, Full Stack Developer,   Nanjing, 2013.08 - 2013.09.
- Develop an Instant Messenger for *Linux* in *C*, which supports sending texts, emoticons, images and files
- Program a multi-threading client using *Gtk* and *pthread* to make Graphic UI, messenger and other components not blocking each other
- Design and implement a point-to-point communication mechanism among users to reduce the load of the server

Regular Expression Visualization, *Best Course Project for **Compiler***,   Nanjing, 2014.11 - 2014.12.
- Develop a website to visualize three forms of automata(NFA, DFA, min-DFA) for regular expressions in state machine diagrams