

SHIYU LIU

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Seeking for full-time SDE

EDUCATION

Columbia University	GPA: 3.50	New York, NY
Master of Science in Electrical Engineering		<i>Sep 2018 – Dec 2019(expected)</i>
Courses: Algorithm, Database, Computer Network, Big Data Analysis, Cloud Computing, NLP		
Tianjin University	GPA: 3.53	Tianjin, CN
Bachelor of Science in Automation Engineering		<i>Sep 2014 – Jun 2018</i>

TECHNICAL SKILLS

Programming Languages: Java, JavaScript, Python, C++

Tools&Frameworks: Spark, AWS, PostgreSQL, MongoDB, Hadoop, Hive, Kafka, Qt, Shell, Git

Web Development Skills: Spring Boot, Angular, Node.js, Flask, Express, Ajax, jQuery, D3.js, Bootstrap

EXPERIENCE

Huawei Technologies Co., Ltd. Shenzhen, CN
Software Development Internship *June 2019 - Aug 2019*

- Worked in Test Tool Development team to develop an integrated testing web application based on **Angular 2** and Spring Boot.
- Analyzed complex APIs of Huawei hardware testing results and built test report module using Angular and jQuery zTree. The output code is over **2000** lines.
- Optimized the performance of web pages by adding lazy loading and splitting large module into small pieces. The loading time decreased by **60%**.
- Encapsulated frequently-used components into package and added them into Huawei's Angular framework.

CalmCar Vision System LLC Tianjin, CN
Software Development Internship *Dec 2017 – Apr 2018*

- Developed an embedded application with **Gstreamer** for processing and displaying multiple video streams.
- Hosted a **RTSP** server in application for watching video with extremely high speed and low latency.
- Fulfilled the system test by writing test cases, unit tests with **Gtest** and automated test scripts.

SELECTED PROJECTS

Restaurant Reservation Serverless Website *Feb 2019 – May 2019*

- Built a **serverless** and dynamic website with **AWS S3**, Cognito, API Gateway, Lambda and DynamoDB.
- Crawled NYC restaurant information in Yelp with Requests and stored in **Elasticsearch** for further search.
- Created chatbot using **Lex**, adopted **SQS** queue to store reservation information temporarily and then sent message to customer by SNS.
- Devised the recommendation module by calculating best matching restaurants and dropping those far away from customers with Google Maps API.

Movie Recommendation Web Application *Sep 2018 – Dec 2018*

- Developed a full stack web application with **Flask**, **PostgreSQL** and **Spark**.
- Designed relational database from ER diagram to relational model, preprocessed MovieLens dataset using **Pandas**, utilized psycopg2 to insert data into Postgres and SQLAlchemy to perform **SQL** operations in Flask.
- Devised recommendation engine with three algorithms: Spark **ALS**, cosine similarity and weighted mean.
- Showed real-time statistics of movie hashtags in Twitter API using **Socket.IO** and **D3.js**.

Photo-Sharing Web Application *Jun 2018 – Aug 2018*

- Constructed a full stack web service with RESTful architecture and **MEN** stack(MongoDB, Express, Node.js) for photo-sharing and reviewing.
- Implemented user authentication with **Passport.js** and utilized Multer to upload photos to Cloudinary.
- Designed the Ajax based front end with jQuery, Bootstrap and deployed the app to heroku.