Yuqi(Gavin) Tao

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Summary

Current candidate for computer science master's degree at Northeastern University. Eight months of working experience at Huawei Technologies as a full-time software engineer. Looking for a summer internship in 2020.

Education

Northeastern University — San Jose, CA

Candidate for a Master of Science in Computer Science — *Aug. 2019 – June 2021(Anticipated)*

University of California, Irvine — Irvine, CA

Bachelor of Science in Computer Science, GPA:3.187/4.0 — *Sept. 2014 – June 2018*

Skills

Programming Languages:
Java, SQL, Python, Bash, C++

Databases:
MySQL, MongoDB, Redis

Technologies and Tools:
Kafka, OSGi(Karaf), MQTT(Paho), Kubernetes, Maven, Jenkins, log4j, Mockito, Linux, Servlet, JSP, JDBC, Ajax

Work Experience

Huawei Technologies — Shenzhen, China

Software Engineer — *Nov. 2018 - June 2019*

- **RESTful Vehicle Message Reporting Service**
  ECall message is a specific kind of message reported by vehicles in emergency situations in Europe.
  - Designed and implemented RESTful services with Spring Boot for receiving eCall messages reported by vehicles.
  - Decoded hex string from request body into JSON object.
  - Handled high concurrency scenarios by using Kafka as message queuing service.
  - Ensured over 100,000 cars in Europe to be able to report emergencies at the same time within 2 seconds.
- **Vehicle Remote Control over MQTT**
  MQTT is a lightweight publish-subscribe-based messaging protocol.
  - Implemented feature of waking up the vehicle IoT device via SMS before creating MQTT connection.
  - Based on Huawei's Cloud Platform, provided APIs for sending six different remote control commands to the vehicles.
  - Decoded and forwarded response messages to Kafka.
  - Ensured availability on multiple server nodes by registering routing information on MongoDB.
  - Extended the functions of remote controls of Peugeot cars and make it possible to control the cars via mobile phones.
- **OSGi Hot Deployment Adaption**
  OSGi, the Open Service Gateway Initiative, is a specification for a modular system.
  - Designed and implemented the aforementioned services as OSGi bundles for the purpose of hot deployment.
  - Implemented these two features as low coupling plugins that can be installed, removed, run or stopped independently.
  - Significantly shortened the time and reduced the difficulty of deployment, and lowered 25% of the system load.

Academic Projects

E-commerce Website – Java
Developed multiple functions including login/logout and shopping cart with Java Servlets and Sessions. Used JDBC and MySQL to store user info and product info. Implemented features of auto-completion search and popup window via Ajax.

Distributed Web Crawler and Search Engine – Python
Designed and implemented a single web crawler within a distributed crawler system to crawl among UC Irvine's website. Applied NLP techniques to parse the corpus of the crawled web pages. Sorted the crawled data with tf-idf algorithm and stored it in MongoDB. Built a search engine website with Python Flask for querying from the crawled data.