Yuqi(Gavin) Tao

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Summary

Computer Science major student with 1+ years of experience in Java backend development. Developed multiple features for Huawei's IoT Connected Vehicle Platform. Completed school projects in web development including an internet shopping website and a search engine.

Education

- **Northeastern University** — San Jose, CA
  Master of Science in Computer Science (Anticipated Graduation Date: June 2021) — *Aug. 2019 – Now*
- **University of California, Irvine** — Irvine, CA
  Bachelor of Science in Computer Science — *Sept. 2014 – June 2018*

Work Experience

- **Huawei Technologies** — Shenzhen, China
  Software Engineer – Java IoT Developer — *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 service for eCall message reporting with Spring Boot; parse JSON from request body and produce required data on Kafka.
  - **Vehicle IoT Device Remote Waking up over SMS**: Encode JSON into hex code and write into SMS message. Design and implement an RPC API for sending SMS to vehicle side IoT devices to wake them up. Implement features of receiving acknowledgment of SMS and resending if failed.
  - **Vehicle Remote Control over MQTT**: MQTT is a lightweight publish-subscribe-based messaging protocol. Implemented six remote control features over MQTT protocol including remote door locking; turning on/off light, air conditioner and horn; requesting vehicle information, etc. Implement RESTful APIs for mobile users and push results of operations asynchronously via callback URLs.
  - **OSGi Hot Deployment Adaption**: Design and implement the aforementioned services of eCall message reporting and remote control as OSGi bundles in the purpose of hot deployment. Successfully implemented these two features as low coupling plugins which can be installed, removed, run or stopped independently.

School Projects

- **Internet Shopping Website – Java**: Develop multiple functions including login/logout and shopping cart with Java Servlets and Sessions. Use JDBC and MySQL to store user info and product info. Implement auto-completion search and popup window via Ajax.
- **Distributed Web Crawler and Search Engine – Python**: Design and implement a single web crawler within a distributed crawler system to crawl among UC Irvine's website. Apply NLP techniques to parse the corpus of the crawled web pages. Sort the crawled data with tf-idf algorithm and store it in MongoDB. Build a search engine website with Python Flask for querying from the crawled data.
- **Minimal Unix Shell – Bash & C++**: Develop a minimal Unix-like shell that can take various bash command. Implement a command line version trash bin.

Skills

- **Programming Languages**: Java(proficient), SQL(proficient), Python(moderate), Bash(moderate), C++(beginner), JSON, XML
- **Technologies**: Kafka, OSGi(Karaf), MQTT(Paho), Kubernetes, RESTful, RPC, MVC, log4j, Mockito
- **Software and Tools**: Github, Gitlab, Jenkins, Maven, Git, tcpdump, wireshark, postman, IntelliJ, PyCharm
- **Operating Systems**: Linux Server(4 years of experience in hosting proxy service and cloud storage service), Linux Desktop(3 years of daily usage experience on Manjaro & OpenSUSE), macOS, Windows.