NATHAN ZHANG

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Objective: Seeking Full-time Software Engineer Position, Focus on Backend

2+ years hands-on coding experience with solid background in Algorithm, Data structure, and CS fundamentals.
Great passion in new technologies, detail oriented, self-motivated, great adaptability and can-do attitude.

Skills

- Language: Proficient: Java; JavaScript, HTML, CSS, jQuery, React.js, Python, MATLAB, Game Maker Studio 2
- Framework & Platforms: Spring MVC, Spring Boot/Data/Cloud/Actuator, RabbitMQ, Kafka, MongoDB, Redis, MySQL, Hadoop, Hibernate, MyBatis, Firebase, Docker, JWT, Jenkins, JUnit, Maven, Git/GitHub, Jira, Redux
- Technical Skills: Object Oriented Programming, System Design, REST APIs, Microservices, Agile Development, MapReduce, Distributed System, SQL, NoSQL, Multithreading, Concurrency, Responsive Web Design

Experiences

Software Engineer, MedeAnalytics, Inc.   *May 2019 – Present*

- Collaborated in the design and implement the highly scalable RESTful APIs for core microservices of Smart Home Backend System that supports functionalities such as data pipeline processing, registration, and password using **Spring Boot**, **Spring Cloud**, **Maven**, Spring Data, JPA, **Redis**, capable of handling 200+ QPS in benchmark.
- Developed Data Simulator Microservice to simulate and automate the sensors in the smart home device networks like air quality monitors to sending raw environment monitor data to benchmark & test Data RESTful APIs.
- Decoupled the backend services and achieved query buffering by incorporating **RabbitMQ** as a message broker.
- Developed the backend services of Cookie-Session User Authentication using Spring Boot, **MySQL** and Redis.
- Achieved Single-Sign-On by refactoring JWT and Redis for migrating to distributed microservices architecture.
- Designed and developed unit tests for services including user authentication services using **JUnit** framework.
- Drastically cut down development cycle time 15% by using introducing **Maven** to manage package dependencies, **Git** for source code version control, **Docker** for automatic configuration & deployment.

Software Engineer Intern, ArtGeekTech LLC   *Sept 2018 – Apr 2019*

- Developed system applications to collect PM 2.5 and other environment data from multiple types of air sensors and support dynamic uploading using Java, ContentProvider, ContentResolver and SQLite database in Android system.
- Designed the tables and schemas of the SQLite database in Air Data Service App and optimized the business logics according to the incoming environment data type to facilitate the data caching and updating process.
- Effectively built and developed the system app by customizing the Content Provider to support data query, updating, insertion and deletion. And also designed the logic to parse the URI to support different use cases.
- Implemented system apps to efficiently collect data and upload data to service side by using the connect between Content Provider and Content Resolver, providing data in Service App for other multiple apps in the device.
- Optimized data collection logics and designed APIs to support more sensor types to increase the scalability.

Education

M.S., Electrical & Computer Engineering, The George Washington University	GPA3.66/4.00	*Aug 2016 - May 2018*
B.S., Telecommunications Engineering, Beijing University of Posts and Telecommunications		*Aug 2011 - July 2015*

Publication

"Handbook of Mobile Photography: Make It Extraordinary"   ISBN: 9787301285732

- Peking University Press, published in Sept 2017
- Introduce basic photography knowledge based on digital image processing, with professional advices like composition and creative ideas to establish insight into camera function of iPhone and other smartphone devices.