

# Dixin (Steve) Sun

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## SUMMARY

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Seeking a **full-time software engineer** position starting in **Feb 2021**. M.S. in **Computer Engineering - IoT** from **George Mason University**. Proficient in **Java full stack development** with common development frameworks and cloud platforms. Good understanding in **object-oriented programming/data structures/algorithms/system optimizations**. Hands-on experience in **web/mobile/machine learning** development.

## EDUCATION

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<b>George Mason University</b> <i>Master of Science in Computer Engineering; GPA:3.7/4.0</i>	Fairfax, VA <i>Aug. 2018 – Aug. 2020</i>
<b>XingJian College of Science and Liberal Arts of Guangxi University</b> <i>Bachelor of Engineering in Automation; GPA:3.8/4.0</i>	Guangxi, China <i>Aug. 2013 – July. 2017</i>

## CERTIFICATIONS

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**AWS:** AWS Certified Solutions Architect - Associate (Validation Number: 1QDWJL32MMQE14G5)

## TECHNICAL SKILLS

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Languages: **Java, Python, HTML, CSS, JavaScript, SQL, Go**  
Frameworks: **Spring, Hibernate, MyBatis, Node.js, React.js, D3.js, JUnit**  
Database: **MySQL, MongoDB, Redis**  
Cloud: **Amazon Web Service, Google Cloud Platform**  
Others: **Android, Git, Docker, Elasticsearch, RocketMQ, Zookeeper, JMeter**

## EXPERIENCE

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<b>Tianqi Technology Co., Ltd.</b> <i>Software Engineer Internship</i>	Shenyang, China <i>May. 2019 - Aug. 2019</i>
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- Worked in a team of 5 to develop a server-side REST APIs for order service in a B2C e-commerce platform for AG business (20M+ users) using **Spring Boot** and **Spring MVC** and **MyBatis**.
- Applied **Redis** cluster and increased the throughput from 2000 QPS to 8000 QPS on a 8-core 10G machine.
- Conducted **Lua** scripting to avoid overbought and oversold problems.
- Improved the service resilience by using **RocketMQ** and **Alibaba Sentinel** to achieve throttling and asynchronous messaging with 60% reduction in query processing latency.
- Evaluated test data of over 80 test cases and fixed 10 test failures, also performed load testing by **JMeter**.

## PROJECTS

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### Atlas Streaming - AWS based Twitch Resources Recommendation Engine

- Developed an interactive web page by **React.js** and **Ant Design** for users to search Twitch resources (stream/video/clip), update preference and view recommended contents.
- Created Java servlets with **RESTful APIs** to handle HTTP requests and responses.
- Created a **MySQL** database on **Amazon RDS** to capture data from Twitch API, designed **content-based recommendation** algorithms to implement event recommendations on favorite records.
- Deployed to **Amazon EC2** with **AWS Certificate Manager** and **AWS ELB** for HTTPS deployment.
- Implemented JDBC connection pool with 200% improvement in QPS tested by **JMeter**.

### Stardust - SpaceX data analysis and visualization based on React

- Designed and developed a visualization dashboard using **React.js** to track the path of launched SpaceX satellites in real-time based on geo-location.
- Built location, altitude, and duration based selector to refine satellite search.
- Visualized selected SpaceX paths on a world map using **D3.js** to improve the user user-friendliness.
- Deployed the dashboard to **Amazon Amplify** for demonstration.

### **Andrew News - Android based News App**

- Designed the Tinder Flavor News app based on Google Component Architectural MVVM Pattern.
- Implemented the bottom bar & page navigation using **JetPack** navigation component.
- Utilized **MindOrks**'s CardStackView to support swipe gestures for liking/disliking the news.
- Built the **Room Database** with LiveData & ViewModel to support a local cache and offline model.
- Integrated **Retrofit** and **Rxjava** to pull the latest news data from a RESTFUL endpoint (newsapi.org).

### **Sakura Shop - Spring and Hibernate based shopping and ordering system**

- Built a web application based on **Spring** for users to browse and shop items online.
- Implemented the backend services with **Spring MVC** to support item search and listing (dependency injection, inversion of control, REST API etc).
- Implemented a security workflow for user via in-memory and JDBC authentication by **Spring Security**.
- Created a MySQL database to store user and item information, and utilized **Hibernate** to provide automated object-relational mapping support of database operations.
- Developed **Spring Web Flow** to support order checkout behavior.

### **WeNet - Geo-index and Image Recognition based Social Network**

- Co-designed a geo-based social network web application with **Go** and **React.js** to support users to create and browse posts and support nearby search posts based on Geolocation API and Google Map API.
- Built a scalable web service in **Go** to handle posts and deployed to **Google Cloud** for better scaling.
- Utilized **ElasticSearch** to provide geo-location based search functions and implemented **Google DataFlow** with **BigQuery** for offline analysis.
- Applied **Google Cloud ML API** and **Tensorflow** to train a face detection model and integrated with Go service.