Jacob Robertson

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Skills

Languages: Python, Java, C++, SQL
Frameworks: Spring Boot, Spring, Apache Kafka, Maven, JakartaEE, Jenkins/GitLabCI, Docker/Kubernetes
DBMS: MongoDB, OracleSQL

Education

University of South Carolina – BS in Computer Science – 3.87 GPA   Exp. Dec 2025
Relevant Coursework – Data Structures & Analysis, Software Engineering, Introduction to Databases, Visualization Tools, Algorithmic Design I & II, Unix/Linux fundamentals, Digital Logic and Design, Calculus I, II & III, Discrete Structures

Experience

Associate Software Enginner, Spectrum - Charlotte, NC   May 2025 – Present
Architected and deployed highly performant and scalable RESTful APIs using **Spring Boot**, consistently managing over 20 million daily requests while optimizing for low-latency performance.
Engineered and optimized Kafka listener applications to modernize data ingestion pipelines, including the development of a scheduled job to automatically reprocess failed records and ensure end-to-end data reliability.
Proactively managed system health and provided data-driven insights by analyzing **Splunk logs** to identify and resolve critical issues, and by writing **SQL and Splunk queries** to support project planning and daily reporting.
Developed robust asynchronous batch jobs using **Spring Batch** to automate the reconciliation of complex data schemas, ensuring data integrity across large-scale systems.
Collaborated with cross-functional teams to define project requirements, troubleshoot issues, and implement new features, ensuring seamless integration between frontend and backend systems.
Contributed to a CI/CD pipeline by writing unit and integration tests, performing code reviews, and automating deployment processes to improve development efficiency.

Projects

Degree Works   github
Developed a fully functional application replicating the functionality of Degree Works for academic planning and tracking using OOP principles in Java.
Collaborated effectively with a team of 5 to design and implement core features utilizing a SCRUM workflow.
Utilized JavaFX for building a responsive and interactive user interface.

Spotify Data App   github
A full-stack web application allowing users to log in with their Spotify accounts and view personalized music data.
Built the backend using Flask and MongoDB to handle user authentication and data storage.
Created a dynamic frontend using ReactJS and CSS for an intuitive and responsive user experience.
Integrated the Spotify API to fetch and display data on top tracks, genres, and listening habits.

Misc Scripts & Smaller Projects
Developed a script to convert Spotify playlists to YouTube Music using Spotify and YouTube Music's API, automating playlist transfer between platforms. Source
Created a fractal generator implementing the escape time algorithm and histogram coloring techniques to visualize fractals. Source
Script that collects and stores real-time listening data using the Spotify API. Source