Samuel Musgrave Jordan

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Backend software engineer with 3 years of experience architecting and delivering high-performance Java applications in the fintech sector. Based in London, UK.

Experience

Engine by Starling London, UK

Software Engineer | Java, Guice, Postgres, TeamCity, Kubernetes, AWS *August 2024 – Present*

- Backend developer for a greenfield lending service, delivering a comprehensive platform that interfaces with mobile apps, web management portals, and via API. Implemented core business logic and integration points using Java and Guice.
- Architected a highly configurable lending system using domain-driven design principles, enabling clients to customize application workflows, credit decisioning rules, and market-specific requirements through configuration rather than code changes.
- Successfully delivered the platform to production within an aggressive 9-month timeline, utilizing AWS infrastructure and Kubernetes for scalable deployment while maintaining high availability and performance standards.

American Express Brighton/London, UK

Software Engineer | Java, Spring, Postgres, Jenkins *September 2022 – August 2024*

- Contributed to American Express's global statements platform, processing over 10 million daily statement documents with a near zero failure rate. Implemented critical features using Java Spring, ensuring scalability and maintaining strict financial compliance standards.
- Spearheaded the development of an innovative bank statement generation service, resulting in annual cost savings exceeding £1M anually. Designed and implemented a fault-tolerant microservice architecture utilizing Kafka for event streaming, Postgres for persistent storage, and Redis for caching.
- Established robust quality assurance practices by implementing comprehensive JUnit test suites. Automated deployment pipelines using Jenkins, enabling continuous integration and deployment.

Projects

Raytracer | *C++, CMake, GLSL, OpenGL*

- Implemented a ray tracer in C++, utilizing OpenGL for graphics rendering.
- Features reflections aswell as ambient, specular and diffuse lighting effects to create realistic and visually appealing 3D images.
- Chose an object-oriented design to allow for easy modification and expansion.
- Utilized efficient algorithms and data structures to optimize performance and achieve real-time rendering.

Orderbook | *C++, CMake, Gtest*

- Developed a limit order book in C++.
- Can place/cancel limit orders. Orders are matched with a standard price-time priority.
- Utilized the correct data structures to optimise performance, including min/max heaps for bid/ask books and doubly linked lists for limit levels. Hashmaps of orders and limit levels are maintained to reduce look-up complexity.
- Built with unit tests in the gtest library and automated via github actions.

Technical Skills

Languages: Java, Python, C/C++, SQL
Frameworks & Libraries: Spring, Guice
Developer Tools: Redis, Couchbase, Postgres, Kafka, Maven, Gradle, Jenkins, TeamCity, Kubernetes, AWS

Education

University of Southampton Southampton, UK

MEng Aerospace & Astronautics, Upper Second Class Honours *Sep. 2018 – Jun. 2022*