James Dunsmore Software Engineer

Highly skilled software engineer with proficiency in a diverse range of programming languages, including Java, Python, C++, Rust, Golang, and more. Strong foundation in software development for quant trading, data science, and machine learning, with expertise in building and optimizing production-grade applications. Proven ability to tackle full-stack responsibilities, from low-level infrastructure to front-end solutions, with extensive experience in Java and Spring for backend development.

Professional Experience

Full-Stack Software Engineer & Researcher

BAE Digital Intelligence | London, UK

August 2023 − Present

- Developed bespoke, high-assurance software solutions for clients, working directly with stakeholders to gather requirements, generate designs, and deliver tailored solutions.
- Led the full development lifecycle, from concept to deployment, utilizing a wide variety of technologies to ensure the best possible solution for each problem, with a strong emphasis on Java and Spring Boot for backend development.
- Delivered high-quality software independently and within collaborative teams, adapting to the needs of each project, whether focusing on performance, scalability, or security.
- Played a key role in client-facing engagements, translating complex technical concepts into actionable insights and requirements.
- Researched and implemented innovative technologies and approaches to solve unique and complex challenges, often working with cutting-edge software stacks and architectures.

Technologies Used:

- **Languages**: Java, Python, Golang, Rust, C++, TypeScript, SQL
- **Backend Frameworks**: Spring Boot, Flask, Django
- **Web Frameworks**: HTML/CSS, JavaScript
- **DevOps & Deployment**: Docker, Kubernetes, CI/CD, Linux
- **Data Science & Analytics**: Pandas, NumPy, ML models
- **Methodologies**: Agile, Scrum, TDD, BDD

Full-Stack Software Engineer

SVGC | London, UK

June 2022 – August 2023

- aided in the development lifecycle of software solutions for government agencies, specializing in Java, Spring Boot, Python, SQL, and Docker in a full-stack capacity.
- Designed and developed Spring Boot microservices, ensuring efficient and scalable backend solutions.
- Analyzed and managed large datasets stored in PSQL, developing tools using Pandas, NumPy, and Flask to automate and visualize insights.
- Built a high-performance tool to detect, correct, and flag erroneous user input, ensuring data integrity, accuracy, and error prevention across systems.
- Implemented RESTful APIs using Spring Boot, integrating them with various front-end and database technologies.
- Drove continuous integration and delivery (CI/CD) pipelines using Gradle, Docker Compose, and Bash scripts for seamless deployment of applications across environments.
- Collaborated with cross-functional teams and engaged with partner company software, gaining commercial exposure to Go, PHP, and Java.

Technologies Used:

- **Languages**: Java, Python, Golang, Rust, C++, SQL
- **Backend Frameworks**: Spring Boot, Flask, Django
- **Data Tools**: Pandas, NumPy, ScikitLearn, PyTorch
- **DevOps**: Docker, Docker Compose, Gradle, Bash, Linux
- **Web Frameworks**: HTML/CSS, JavaScript

Skills

- **Languages**: Proficient in Java, Spring Boot, C++, Python, Golang, Rust, C, SQL, TypeScript, and more. Experience in developing multi-threaded applications for high-performance environments.
- **Backend Development**: Extensive experience building backend services with Java and Spring Boot, developing RESTful APIs, managing microservices architecture, and optimizing system performance.
- **Quantitative Analysis**: Strong understanding of financial models and trading strategies through academic projects and commercial experience. Developed cryptocurrency trading bots utilizing machine learning algorithms to predict price movements and execute trades.
- **Data Science & Machine Learning**: Hands-on experience with machine learning models, data manipulation using Pandas and NumPy, and deep knowledge of data science workflows for forecasting and anomaly detection.
- **Production Deployment**: Experienced in CI/CD pipelines, Docker orchestration, and production deployment of scalable applications.
- **Full-Stack Development**: End-to-end experience building web applications, from front-end interfaces (using HTML/CSS, JavaScript) to backend services (using Java, Spring Boot, Flask).

Education

Solent University, Southampton Bachelor of Software Engineering, Honors (2:1) Dissertation: Forecasting Bitcoin prices using machine learning to develop an automated cryptocurrency trading system.