

ALIREZA RAHNAMA

Senior Software Developer, Certified AWS Solution Architect | Toronto, ON

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WORK EXPERIENCE

Nasdaq Verafin: Financial Crime Management SaaS

St. John's, NL
Dec 2023 – Present

Senior Software Developer

- Refined data models and optimized ETL workflows by developing event-driven, scalable microservices, enhancing real-time and batch processing performance with **Java, Scala, Spark SQL, AWS S3, Glue, DynamoDB, Lambda, Step Functions, EventBridge**.
- Boosted online banking data import time by 300% by debugging latency bottlenecks using **functional indexes, Splunk, SQL, Java**.
- Reduced QA costs and improved system reliability by conducting unit and integration testing with **JUnit, Mockito, AWS**.
- Increased data integrity and minimized import failures by automating data validation using **Bash, AWK, and Python**.
- Streamlined SDLCs and customer onboarding by participating in code reviews and collaborating with cross-functional teams to build and deploy solutions using agile methodologies and tools such as **Confluence, Salesforce, Git, and GitHub**.

Verafin Inc.: Financial Crime Management SaaS

St. John's, NL
Sep 2022 – Nov 2023

Software Developer

- Detected 85% of fraudulent transactions by developing Java analytical plugins via object-oriented and test-driven development.
- Reduced false negatives by 30% and enabled fraud detection of \$9M+ by optimizing payment plugins and data collector algorithms.
- Slashed SQL query execution time from 20+ minutes to under 1 minute by optimizing queries for 10M+ daily transactions using **QueryDSL and PostgreSQL**.
- Debugged system failures by analyzing Java Service Wrapper and CloudWatch logs, utilizing **Bash, Vim, Splunk, and Amazon SSM**.

Hibernia EOR Group – ExxonMobil: Energy Technology Research & Development

St. John's, NL
Jan 2022 – Aug 2022

Data Engineer/Scientist

- Cut data processing time by 90% by automating ETL pipelines for 1TB+ heterogeneous time-series datasets using **Python, Apache Spark SQL, Databricks Delta Lake**.
- Improved predictive model accuracy by 25% and enabled data-driven decision making through data analysis (**EDA**) and data engineering leveraging **Python** libraries (**NumPy, Pandas, Matplotlib, Seaborn**) and **Power BI**.
- Enhanced drilling efficiency by 15% by launching and fine-tuning ML algorithms in Azure Databricks using Scikit-learn, TensorFlow, and PyTorch.

EDUCATION

Memorial University of Newfoundland

St. John's, NL

- Bachelor of Science in Computer Science
- Master of Applied Science in Oil & Gas Engineering

Sep 2020 – Dec 2023
Jan 2018 – Oct 2019

CERTIFICATIONS

Amazon Web Services Training and Certification

AWS Certified Solutions Architect – Associate 

Valid through Feb 2028

SKILLS

Languages & Frameworks: Java, Python, C#, JavaScript, Spark SQL, Scala, React, Spring Boot, OpenCV, Dart, Flutter.

Database Management Systems: PostgreSQL, SQLite, MongoDB; **Infrastructure as Code:** Terraform, CloudFormation

Operating Systems: Linux, MacOS, Windows; **Cloud Computing:** AWS, Azure.

CI/CD: Jenkins; **Virtualization:** Docker; **Visualization:** Power BI; **Other:** IntelliJ, Gradle, Maven, Jira; Postman, Tomcat, Copilot.

PROJECTS

RutterSim - Optimizing Rutter Inc.'s Software Suite Infrastructure Simulation: Industrial 

May 2023 – Aug 2023

- Led a team of 5 to architect a multithread application emulating radar systems and the Sigma S6 software suite, collaborating with clients to gather requirements. Utilized **Java, C#, Maven, MongoDB, gRPC, Protobuf**, and **Azure Container Instances** to improve system efficiency. Advised on scaling strategies, ensuring optimal performance and scalability.

ServiceSquad - Android/iOS Mobile App: Personal 

Sep 2023 – Dec 2023

- Built a marketplace app connecting service providers and clients.; Featuring service ads posting, booking management, customer reviews, payment processing, and real-time messaging. Leveraged **Flutter, Dart, Firebase, Stripe** to ensure scalability and security.

VineSight: Personal 

Jul 2023

- Created a web scraping wine recommendation system using **C#, .NET, MongoDB**, and **Google Search API**.

Movies App: Personal [🔗](#)

May 2023

- Developed a web application with a **RESTful API** using **MVC design pattern**, **Java Spring Boot**, **MongoDB**, **React.js**, **AWS S3**.

Portfolio Website: Personal [🔗](#)

Jan 2022 – Jan 2023

- Deployed 2 portfolio versions using **React.js**, **Tailwind CSS**, **JavaScript**, **HTML**, **Node.js**, **jQuery**, **Bootstrap**, **GitHub**, **Amplify**.

Computer Vision | Java Arcade: Academic [🔗](#)

Jan 2022 – Apr 2022

- Built 3 **Java image processing** apps: **Pixel Wiz**, **Threshold Vison**, **Shape Detector** to augment pixels, extract features, identify shapes.

Machine Learning: Personal & Academic [🔗](#)

Sep 2019 – Apr 2022

- Cleansed data, trained and evaluated multiple machine learning models including **KNN**, **Random Forest**, **XGBoost**, **Lasso**, **Linear**, and **Logistic Regression** in 4 projects to successfully classify genomes, label clothing items, and predict automobile pricing.