

ALIREZA RAHNAMA

Software Developer

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Work Experience

Back-End Software Engineer Student | Verafin Inc. | St. John's, NL | 09/2022 - 04/2023

- Developed Return agent version 1.0 (**Java, object-oriented, test-driven**) to analyze illicit behavior, detecting 85% of known fraudulent return cases during development phase.
- Optimized Payment plugin by refining data collectors' algorithms, resulting in a 30% reduction in false negatives and saving clients over \$9M annually in potential loss.
- Enhanced **SQL** queries for 10M+ daily transactions using **Querydsl** and **PostgreSQL JDBC API**, reducing query times from 20+ to under 1 minute and slashing cloud costs by 95%.
- Conducted **unit testing** and **QA testing** via **JUnit** and **Mockito** to resolve potential problems early in SDLC, resulting in fault-tolerant software design and reduced QA costs.
- Automated tasks, analyzed logs, and troubleshoot production failures leveraging **Shell/Bash scripting**, **Java Service Wrapper**, and **Amazon Systems Manager** on **AWS EC2**.
- Streamlined the software development life cycle by participating in code reviews using agile/scrum methodologies and tools such as Confluence, Salesforce, Git, GitHub.

Data Scientist | Hibernia EOR Group - ExxonMobil | St. John's, NL | 05/2022 - 08/2022

- Automated the **ETL** process and integration of 1TB+ of heterogeneous time and dept-based datasets with multiple formats leveraging **Python** and **Apache Spark SQL**, reducing data discrepancies and processing time by 90%.
- Resolved data anomalies via EDA and visualization, utilizing **Python** libraries (**NumPy**, **Pandas**, **Plotly**, **Matplotlib**, **Seaborn**) and **Power BI**, facilitating decision-making in a cross-functional team and increasing predictive model accuracy by 25%.
- Launched and fine-tuned **machine learning algorithms** leveraging **Python** libraries (**Scikit-learn**, **TensorFlow**, **Pandas**, **NumPy**, **TensorFlow**, **PyTorch**) in **Azure Databricks**, optimizing rate of penetration and reducing drilling costs by 15%.

Facilities Manager | Memorial University | St. John's, NL | 08/2021 - 04/2022

- Leveraged **Python** to automate admin tasks, reducing manual data entry by 1000+ hours.
- Directed 30+ employees, enforcing policies, reducing incidents, and increasing efficiency.

Projects

- **SigmaBench**: Architected and implemented a desktop app to benchmark the performance of Rutter Inc's commercial software on Azure ACI leveraging **Java**, **Maven**, **gRPC**, **Protobuf**.
- **Movies App**: Developed an end-to-end web application featuring a **RESTful API** leveraging **Java Spring Boot**, **MongoDB Atlas**, and **React.js**.
- **Portfolio**: Built a portfolio using **React.js** and **Tailwind CSS** and established its **CI/CD** pipeline using **GitHub** and **AWS Amplify**.
- **Reminder App**: Built a full-stack **React.js** app to manage tasks on a **JSON** file.
- **Java Arcade**: Designed 2 **Java GUI** games: **King Domino** & **Mind the Gap**.
- **Computer Vision**: Implemented 3 **Java image processing applications**: **Pixel Wizard**, **Threshold Vision**, **Shape Detector** to augment pixels, extract features, and identify shapes.
- **Personal Website**: Launched a **portfolio** featuring a responsive design and embedded **Twitter's API** using **Vanilla JavaScript**, **HTML**, **CSS**, **Node.js**, **jQuery**, and **Bootstrap**.
- **Machine Learning Projects**: Designed 4 projects and trained models to **successfully** classify **bioinformatics data**, label clothing items, and **predict automobile pricing** using **KNN**, **Random Forest**, **XGBoost**, **Lasso**, **Linear** and **Logistic Regression**.

Skills

Programming Languages: Java, Python, JavaScript, Spark SQL, Scala, C/C++

Web Development: HTML5, CSS, React

Unit Testing: JUnit, Mockito

Analytics & Visualization: Power BI

DBMS: PostgreSQL, SQLite, MongoDB

Version Control: Git & GitHub

CI/CD: Jenkins

Virtualization: Docker

Cloud Computing: Azure, AWS

OS: Linux, MacOS, Windows

Visual Computing: OpenCV

Other: IntelliJ, Gradle, Maven, VS Code, Jupyter Notebook, Vim, Jira, Postman

Education

BSc. in Computer Science

Memorial University of Newfoundland
09/2020 - 12/2023 (Dean's List)

MSc. in Oil & Gas Engineering

Memorial University of Newfoundland
01/2018 - 10/2019

BSc. in Petroleum Engineering

Islamic Azad University
09/2011 - 06/2015

Certifications

Java Spring Boot | Amigoscode

C/C++ | ACENET

AWS Cloud Practitioner | Pluralsight

React 17 | Pluralsight

Splunk Fundamentals | Splunk - NYC

JUnit 5 | Pluralsight

Java SE 8 Programming | Pluralsight

Python & Machine Learning | ACENET

Complete Web Development | Udemy

Complete Python Bootcamp | Udemy