

# YUVRAJ KALSI

St. John's, Newfoundland

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## Education

### Memorial University of Newfoundland

St. John's, NL

*Bachelor of Science (Honours) in Computer Science and Mathematics (Minor)*

May 2021 – April 2025

- Dean's List (2021–2022)
- Memorial Centre of Entrepreneurship LearnLaunch Bursary (\$1000)
- AWS Certified Cloud Practitioner

## Experience

### Paladin Security Group

May 2025 – Present

*Security Operations Centre Administrator*

St. John's, NL

- Maintain and audit access control databases (C\*Cure 9000, Axiom V, P2000) for NL Health Services.
- Support ID badge issuance, deactivation, and permissions updates while ensuring compliance with provincial guidelines.
- Conduct detailed video review reports and monitor security alarms to support incident investigations.
- Collaborate with NLHS teams to ensure ethical data handling, system integrity, and efficient SOC operations.

### DIAG labs - Memorial University of Newfoundland

Sept 2024 – April 2025

*Honours Research Student*

St. John's, NL

- Integrated HTCondor as a metascheduler across Virtual Machines and the Compute Canada HPC cluster to support scalable biomedical image analysis workflows; implemented with shell scripting.
- Developed automated job submission pipelines with Slurm-HTCondor integration.
- Represented honours thesis poster at the 2025 Scientific Endeavours in Academia Conference.

### Memorial University of Newfoundland

Sept 2022 – April 2023

*Molecular Biology Research Assistant*

St. John's, NL

- Used Python APIs to retrieve and process genome data from the National Center for Biotechnology Information.
- Applied data transformation and statistical techniques using Pandas, NumPy, and scikit-learn to assist with clustering, classification, and dimensionality reduction (PCA) and created visualizations to facilitate biological insights.

### SmartBin Technologies Inc

May 2022 – April 2023

*Software developer*

St. John's, NL

- Developed and maintained the frontend of the SmartBin waste management system using React, integrating with a Django backend, PostgreSQL database and REST APIs.
- Part of the early-stage team whose work led to the startup winning the Mel Woodward Cup 2023.

## Projects

### AI-Powered Fitness Application (GitHub)

April 2025

- *Tech Stack:* Java, Spring Boot, React, Spring Cloud, RabbitMQ, MongoDB, PostgreSQL, Keycloak, Google Gemini API
- Developed a full-stack fitness tracking system using a **microservices architecture**, integrating AI-driven health recommendations via **Google Gemini API**.
- Implemented services using **Spring Boot**, with **Spring Cloud Gateway** for routing, **Eureka** for service discovery, and centralized configuration using **Spring Cloud Config Server**.
- Used **RabbitMQ** for asynchronous messaging between services, enabling event-driven AI analysis of user activities.
- Created a secure OAuth 2.0 login and access control system with **Keycloak**, implementing the PKCE flow and syncing user identities.
- Used Gemini AI service to process activity data, parse JSON recommendations, and store results in **MongoDB**.
- Built frontend in **React.js** with Redux to handle authentication, activity tracking, and viewing of AI-powered insights.
- Designed an end-to-end architecture supporting **REST + async messaging**, **multi-database persistence**, and scalable deployment with **Docker**.

## Technical Skills

**Languages:** Python, Java, R, C, C++, JavaScript, HTML, CSS, SQL, Bash, Verilog, Assembly

**Developer Tools:** VS Code, Eclipse, IntelliJ, Android Studio, Git, GitHub, GitLab, Postman, AWS, Docker, Terraform, Jupyter, LaTeX, RabbitMQ, Keycloak

**Technologies/Frameworks:** Spring Boot, Spring Cloud, Spring Security, React.js, Redux, Tailwind CSS, Bootstrap, Node.js, Flask, MongoDB, PostgreSQL, MySQL, HTCondor, OAuth 2.0, REST API, Gemini/ChatGPT API