

# SAUMYA RANA

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## SUMMARY OF SKILLS AND QUALIFICATIONS

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**Operating Systems** | Windows • Linux • Unix • Mac

**Applications** | Word • Excel • PowerPoint

**Programming** | Java • Python • C++ • C • HTML • CSS • JavaScript • TypeScript • SQL • PostgreSQL

**Platforms** | Java SE/EE • Spring Boot • Spring Security • MongoDB • React • Kafka • Keycloak • OAuth2/JWT • Docker • Redux

**Methodologies** | Agile and Scrum • CI/CD • Unit Testing • Test-Driven Development • Project Management

**Tools and Technologies** | Wireshark • Jenkins • GitHub Actions • IntelliJ IDEA • Eclipse • Git • Jira • Docker • JUnit • Postman • VirtualBox • JaCoCo • Testing Library • Jest

**Languages** | English | Spoken & Written – fluent • French | Spoken & Written – beginner

## EDUCATION

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### Master of Applied Computer Science Co-op

2024 - 2026 (Expected)

Concordia University, Montreal, QC

- Member of the Institute for Co-operative Education
- Relevant Courses: Algorithmic Design Techniques, Artificial Intelligence, Distributed System Design
- GPA 3.91/4.30

### Graduate Diploma in Computer Science

2023 - 2024

Concordia University, Montreal, QC

- Relevant Courses: Advanced Programming in C++, Operating Systems, Data Structures (in Java, C++)
- GPA 3.94/4.30

### Bachelor of Engineering - Electronics and Communications

2013 - 2017

Chitkara University, Punjab, India

- Relevant Courses: Object-Oriented Programming, VLSI Design, Programming in C, Computer Networking

## PROJECTS

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### Fitness Microservices App (Personal)

2025

Concordia University, Montreal, QC

- Built a microservices-based fitness tracker with secure login via Keycloak (OAuth2/OIDC) and JWT
- Integrated Gemini API for AI-driven activity insights and personalized recommendations
- Enabled service discovery with Eureka and inter-service messaging with Kafka
- Developed user/activity modules with React frontend, Spring Boot backend, and MongoDB storage

**Technical Skills:** Spring Boot, React, Keycloak, JWT, MongoDB, Kafka, Eureka, Spring Cloud Gateway, Gemini API, Axios, Postman, Material UI

**Core Competencies:** Microservices Architecture, Secure Auth, Async Messaging, Service Discovery, Component-Based UI, AI Integration

### Full Stack E-commerce App (Personal)

2025

Montreal, QC

- Built a secure e-commerce platform using Spring Boot and React, enabling product and user management
- Developed RESTful APIs with Spring Data JPA and PostgreSQL for backend persistence
- Implemented JWT-based authentication and role-based access using Spring Security
- Designed responsive UI with theme toggling, protected routes, and reusable components
- Explored Redux for state management and tested endpoints using Postman

**Technical Skills:** Java, Spring Boot, Spring Security, JWT, PostgreSQL, JPA, React, Redux, Axios, Postman, Docker

**Core Competencies:** Full Stack Development, Secure API Design, Authentication and Role Management, RESTful Architecture, Component-Based UI, Client-Server Integration

### Machine Learning (Academic)

2025

Concordia University, Montreal, QC

- Trained and evaluated machine learning models (supervised, semi-supervised, neural networks) on diverse datasets to assess performance differences
- Technical skills: Python, Scikit-learn, TensorFlow, Neural Networks, Semi-Supervised Learning

**Core Competencies:** Distributed Systems, Adaptability, DevOps Practices

### Distributed System Design (Academic)

2024

Concordia University, Montreal, QC

- Built a distributed system to search Spotify playlists in near real-time based on keywords and engagement metrics using the ELK Stack (Elasticsearch, Logstash, Kibana)
- Designed a scalable and fault-tolerant architecture using Docker containers, enabling horizontal scaling and high availability
- Processed and visualized large-scale playlist data with Kibana dashboards, optimizing search efficiency and system resilience
- Technical skills: ELK Stack, Docker, Distributed Systems

**Core Competencies:** Containerization, Scalable Architecture, Fault Tolerance, Real-Time Search, Large Dataset Processing

## WORK EXPERIENCE

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### Business Operations Manager

July 2019 – July 2023

Arian Drugs & Surgical, Himachal Pradesh, India (Family-Owned Business)

- Managed stock and website updates, ensuring accurate product listings and smooth e-commerce functionality, leading to a 15% improvement in customer retention
- Optimized internal processes, reducing order-processing time by 20% through enhanced supplier coordination.

**Core Competencies:** Organization • Adaptability • Communication

**Skills:** Operations Management, Inventory Planning, Logistics Coordination, Client Relationship Management, Excel Automation, Vendor Negotiation

### Senior Software Engineer

July 2017 – June 2019

Capgemini Technology Services India Ltd., Bangalore, India

- Contributed to Agile teams supporting mainframe systems; improved batch processing efficiency by 10%
- Validated 150+ version inputs across T24 modules (CUSTOMER, ACCOUNT, FT, LD), flagged data issues, and supported UAT/test documentation

**Core Competencies:** Agile Collaboration • Testing • Mainframe Ops • Documentation

**Skills:** COBOL/Mainframe, T24, Agile, Testing Coordination

## INTERESTS

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**Reading**

Non-fiction, particularly books on history and astrophysics

**Sports**

Shuffle dancing (since 2019), yoga

**Passions**

Guitar and ukulele (2019 - present), creative problem-solving