Amitoj Singh
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SUMMARY

4th-year Computer Science student specializing in Software Practices at the University of Alberta. Experienced in delivering Hybrid Cloud and AI-driven solutions through scalable data pipelines and full-stack architecture. Proficient in Python (Spark), Java (Spring Boot), and SQL with a focus on translating complex client business requirements into high-impact technical outcomes.

- Availability: 8-month work term starting May 2026; returning to full-time studies thereafter.

TECHNICAL SKILLS

- Data & AI Engine: SQL, Spark (Python/Java), Presto, Airflow, Flink, Pandas/NumPy, Scikit-learn.
- Cloud & DevOps: Hybrid Cloud concepts, Docker, AWS, CI/CD (GitHub Actions), Heroku.
- Software Engineering: Java (Spring Boot), Python (Django/Flask), TypeScript (Next.js), C#, C/C++, SQL.
- Business Intelligence: Quantitative Analysis, Data Visualization (Matplotlib), Requirements Coordination.

PROJECTS

Social Distribution Network | Django, PostgreSQL, Spark, React
- Data Pipeline Engineering: Architected a decentralized networking platform using REST APIs; integrated Spark and Pandas for processing high-volume interaction data.
- ETL Automation: Developed Airflow-inspired automation for data synchronization across distributed nodes, ensuring the integrity of federated records.
- Client Insight Generation: Built a Business Intelligence dashboard to provide quantitative analysis of platform performance, converting raw data into strategic recommendations.
- Security & Cloud: Implemented secure HTTP authentication and practiced distributed systems deployment in cloud environments.

Enterprise File System Simulator | C, Low-Level Systems, Data Structures
- Technical Architecture: Designed a simulated file system with custom system calls for structured storage, mimicking the data reliability required for banking and payment systems.
- Integrity Auditing: Implemented consistency checks for i-node validity and block allocation, demonstrating the precision required for mission-critical financial data.

EXPERIENCE

Software Developer Intern | Nestuity | Sept 2025 – Dec 2025
- Full-Stack Transformation: Engineered a consumer-facing web application using Next.js and React for the frontend, supported by a robust Java Spring Boot backend.
- Cloud Deployment & DevOps: Orchestrated the deployment of scalable microservices using Docker and Docker Compose on AWS, ensuring continuous availability.
- API & Database Design: Designed and implemented secure RESTful APIs and structured SQL databases to manage real-time product data and price trends.
- Project Management: Collaborated within an Agile team to manage full-lifecycle development, focusing on delivering value-driven features for a December launch

Undergraduate Teaching Assistant | University of Alberta | Sept 2024 – Present
- Technical Consulting & Support: Act as a technical lead for 100+ student "clients," providing Tier 1 and Tier 2 support for complex software environments and enforcing industry-standard coding practices.
- Stakeholder Communication & QA: Translate complex technical logic into simplified, actionable insights for students to ensure software quality and maintaining performance benchmarks.

EDUCATION & LEADERSHIP

- University of Alberta: B.Sc. in Computer Science (Software Practices).
- Leadership: 3X Vice President of Student Council; 2X Winner of Best Leader for Rejuvenation Camp.
- Awards: Recipient of International Admission and Regional Excellence Scholarships (Total: $7,500+)