Aryan Singh

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EDUCATION

McMaster University — Hamilton, ON, Canada
Master of Engineering in Systems and Technology – Automation Smart Systems, GPA: 3.9/4.0 — Jan 2025 – Dec 2026

Guru Gobind Singh Indraprastha University — Delhi, India
Bachelor of Technology in Electronics & Computer Engineering, GPA: 3.7/4.0 — Jun 2020 – Jun 2024

EXPERIENCE

TD Bank — Toronto, ON
Software Engineer Intern (Co-op) — Sep 2025 – Present
- Built CI/CD validation framework enforcing security gates, IAM policies, and deployment readiness checks across 40+ microservices, reducing production incidents by 25%
- Accelerated deployment cycles by 20% by refactoring Jenkins shared libraries into reusable Groovy/Java components, enabling self-service CI/CD workflows across engineering teams
- Reduced secrets misconfiguration by 30% by architecting multi-tier Vault solution for CRM authentication, implementing test-driven credential schemas across platform services

Angel Lane Partners — Remote, UAE
Machine Learning Developer Intern (Part-Time) — May 2025 – Aug 2025
- Enabled risk scoring for 10,000+ clients by co-developing an IFRS9-compliant Bayesian credit risk model
- Improved credit model transparency by engineering 50+ risk features across financial, behavioral, and operational dimensions, enabling data-driven lending decisions at scale

K2 Nextgen Solutions — Gurugram, India
DevOps Engineer Intern — Jan 2024 – Sep 2024
- Built serverless event-driven log analytics pipeline processing 50K+ events/second using AWS Kinesis, Lambda, S3, Athena, and Glue, reducing infrastructure costs by 35%
- Improved application security by implementing Keycloak SSO and AWS IAM policies across Kubernetes clusters

DevOps Engineer Intern — May 2023 – Aug 2023
- Deployed containerized microservices on AWS using Docker and Ansible, reducing deployment errors by 30% and incident resolution time by 25% through centralized logging with Elastic Stack (ELK)

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, Groovy, SQL, Bash/Shell, Powershell, HTML/CSS
ML & Data: PyTorch, TensorFlow, scikit-learn, PySpark, Pandas, NumPy, Transformers, XGBoost, LightGBM
Frameworks: Spring Boot, Spring Cloud, Flask, Django, Node.js, React, Bootstrap
Databases: MongoDB, PostgreSQL, MySQL, Oracle, Azure SQL, Redis
Cloud & Infrastructure: AWS, Azure, Docker, Kubernetes, Terraform, Ansible, Linux/UNIX
CI/CD & SDLC: Jenkins, GitLab CI, GitHub Actions, Git, Agile/Scrum, Jira, Confluence
Testing & QA: Test-driven development, JUnit, Pytest, Jest, Unit/Integration Testing

PROJECTS

Multimodal Image Captioning with ViT and GPT-2 | *PyTorch, Transformers, ViT, GPT-2* — 2025
- Built end-to-end multimodal pipeline combining Vision Transformers for image encoding and GPT-2 for natural language caption generation, benchmarked on Flickr8K using BLEU, METEOR, and ROUGE metrics

Financial AI Risk & Governance Framework | *Python, XGBoost, LightGBM, MLflow* — 2025
- Developed modular Python framework for credit risk modeling using ensemble methods with integrated uncertainty estimation, calibration checks, and fairness diagnostics for transparent model governance

Fetal Health Classification ML Pipeline | *PyTorch, scikit-learn, Pandas, NumPy* — 2025
- Built end-to-end classification pipeline achieving 95%+ F1-score through hyperparameter tuning, stratified cross-validation, and neural network architectures for multi-class fetal health prediction

CERTIFICATIONS

Deep Learning (Andrew Ng) | AWS Solutions Architect (A Cloud Guru) | Salesforce Flows (Udemy) | CS50 AI (Harvard)