Aviral Garg

Vancouver, British Columbia, Canada ✉ aviral.garg@icloud.com 🔗 in/aviralgarg

SKILLS

- **Programming and ML libraries**: Python, C#, Java, Kotlin, JavaScript, PyTorch, PyTorch Lightning, TensorFlow, tsfresh, lazyPredict, TPOT
- **Cloud & DevOps**: Azure, AWS, GCP, Serverless, Microservices, Docker, CI/CD, IaC, AWS CDK, CloudFormation, Step Functions, AWS Athena
- **Machine Learning**: NLP, LLM, RAG, Embeddings, NER, Time-Series Analysis, Regression, Feature Engineering, Hyperparameter Tuning
- **Soft Skills**: Cross-functional Collaboration, Problem-Solving, Technical Leadership, Effective Communication, Adaptability, Innovation

EXPERIENCE

Software Development Engineer – AI/ML

Amazon | Beauty Tech   **February 2021 – March 2025, Vancouver, BC**
- **AI/ML Pipeline**: Architected AWS SageMaker serverless ML pipelines, optimizing 40+ TB daily processing and halving execution time.
- **Deep Learning Models**: Developed ML models to forecast demand, increasing prediction accuracy by 25% & reducing overstock costs by 15%.
- **Cross-Discipline Collaboration**: Worked closely with hardware teams & ML researchers to optimize & scale out model training and inference.
- **Large-Scale Data Processing**: Scaled processing capabilities to handle over 40 TB of data daily using serverless workflows and AWS services.
- **Synthetic Data Techniques**: Enhanced model robustness by augmenting datasets by 40% through synthetic data generation techniques.
- **Hackathon Achievement**: Led a team of 4 to build an iOS app for makeup tutorials in AR, securing 1st place at the 2022 Amazon Hackathon.

Software Development Engineer

Amazon | Prime Pantry   **June 2020 – February 2021, Vancouver, BC**
- **Performance Optimization**: Enhanced API efficiency, reducing page load time impact by 50% and increasing checkout rates by 2.5%.
- **Infrastructure Enhancement**: Optimized AWS ECS setup with automated performance, stress, and load testing suites for improved reliability.
- **Cost Reduction**: Achieved $30,000 in annual savings through strategic cost optimizations and establishing enhanced AWS usage procedures.
- **Operational Excellence**: Streamlined and automated team pipelines, reducing developer hours by 12 weekly and increasing deployments.
- **Tool Implementation**: Integrated Amazon CodeGuru Profiler, providing a template to streamline performance profiling for all projects.
- **Monitoring & Alerting**: Deployed detailed dashboards and alerting systems for real-time service health monitoring and issue resolution.

AI Software Engineer

T4G Limited   **October 2018 – December 2019, Vancouver, BC**
- **NLP Chatbot Development**: Secured a $100K contract by successfully delivering a Named-Entity Recognition chatbot proof-of-concept.
- **Business Growth**: Improved promo code generation efficiency by 40%, paving the way for 4 additional new contracts in the same domain.
- **Chatbot Implementation**: Developed chatbots using Node.js and Python in Azure, integrating text & speech analysis with CosmosDB and SQL.
- **Automation Scripts**: Automated the extraction of 10 years of version history from 15+ applications, saving 7 dev hr/week with Python scripts.
- **Application Development**: Developed and maintained C# desktop applications and SSIS packages, affecting over 50 million users globally.

Software Engineer – VR/AR

Texavie Technologies Inc.   **December 2017 – May 2018, Vancouver, BC**
- **App Development**: Designed and implemented mobile, computer, MR headset apps in Unity Game Engine for prototype demonstrations.
- **Development Tools**: Reduced prototype calibration time by 60% by developing a debugger crucial to the company's development strategies.
- **Customer Growth**: Increased target customer base by 100% by creating cross-platform game pipelines for Windows, macOS, and Linux.

Software Engineer Intern

Tech Mahindra   **May 2014 – August 2014, Vancouver, BC**
- **Data Migration**: Migrated 25% of GIS spatial data impacting four cities in British Columbia by automating CAD tasks with Python scripts.
- **Testing Improvements**: Improved test coverage from 65% to 100% for Python scripts testing critical geo-spatial data accuracy.
- **Automation Standards**: Established automated testing guidelines and built high-coverage, fully automated test suites for all client projects.

VOLUNTEER WORK

Lead Instructor at Ladies Learning Code

- **Instruction & Mentorship**: Taught and mentored classes of 30+ women and children at Ladies Learning Code (now Canada Learning Code).
- **Curriculum Development**: Delivered comprehensive courses on Python for Data Insights, and HTML/CSS/JavaScript for Web Development.

EDUCATION

Bachelor of Applied Science in Software Engineering

University of British Columbia · Vancouver, BC · Graduated 2019