

# Aviral Garg

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## SKILLS

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- **Programming and Frameworks:** Python, Java, C#, C/C++, JavaScript, TypeScript, Swift, Kotlin, Dart, HTML/CSS, SQL, React, Node.js, Unity
- **Machine Learning:** PyTorch, TensorFlow, SageMaker, NLP, LLM, RAG, Embeddings, ML Pipelines, MLOps, Time-Series, Feature Engineering
- **Cloud & Infrastructure:** AWS (CDK, CloudFormation, Step Functions, ECS, DynamoDB, Athena), Azure, GCP, Firebase, Docker, Serverless, CI/CD
- **Other Skills:** System Architecture, Performance Optimization, API Design, AR/VR, Cross-Platform, Maintainable Testable Code

## EXPERIENCE

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### Software Development Engineer

Amazon | Beauty Tech

February 2021 – March 2025, Vancouver, BC

- **AI/ML (Project Lead):** Architected serverless AWS SageMaker pipelines that processed 40+ TB of data daily and cut execution time by 50%.
- **Cross-Discipline Collaboration:** Mentored 2 ML engineers and 1 ML researcher to scale distributed training and inference workloads.
- **Deep Learning Models:** Built demand-forecasting ML models, boosting prediction accuracy by 25% and reducing overstock costs by 15%.
- **Synthetic Data Techniques:** Augmented time-series datasets with synthetic data to improve demand-forecasting accuracy by 8%.
- **Hackathon Achievement:** Led a four-person team to win first place at Amazon 2022 Hackathon with an AR iOS makeup-tutorial app.

### Software Development Engineer

Amazon | Prime Pantry

June 2020 – February 2021, Vancouver, BC

- **Performance Optimization:** Optimized APIs to shrink page-load impact by 37% and lift add-to-cart and checkout rates by 2.5%.
- **Infrastructure Enhancement:** Drove AWS CDK adoption among teams for CI/CD pipelines that saved at least 12 developer-hours per week.
- **Operational Excellence:** Automated performance, stress, and load testing on ECS, decreasing 40% of the SEV-3 incidents/week.
- **Tool Implementation:** Embedded Amazon CodeGuru Profiler into team SOPs, streamlining performance profiling across projects.
- **Cost Reduction:** Drove USD 30 K annual savings through focused AWS infrastructure cost optimizations and usage policies checks in SOP.
- **Monitoring & Alerting:** Deployed detailed dashboards and alerting systems for real-time service health monitoring and issue resolution.

### AI Software Engineer Intern

T4G Limited

October 2018 – December 2019, Vancouver, BC

- **NLP Chatbot Development:** Delivered a Named-Entity-Recognition chatbot proof-of-concept that secured a USD 100 K contract.
- **Business Growth:** Improved promo-code generation efficiency by 40%, enabling 4 additional contracts, doubling department's yearly profits.
- **Chatbot Implementation:** Delivered Natural Language Processing chatbots on Azure using Node.js, Cosmos DB, and SQL.
- **Automation Scripts:** Automated the extraction of 10 years of version history from 15 applications, saved 7 dev hrs/week with Python scripts.
- **Application Development:** Developed and maintained C# desktop applications and SSIS packages serving over 50 million users globally.

### Software Engineer Intern - VR/AR

Texavie Technologies Inc.

December 2017 – May 2018, Vancouver, BC

- **App Development:** Built mobile, desktop, and mixed-reality headset proof-of-concepts in Unity3D to showcase wearable prototype concepts.
- **Development Tools:** Created a prototype debugger that cut calibration time by 60%, critical to product launch deadlines.
- **Customer Growth:** Increased target customer base by 100% by creating cross-platform game pipelines for Windows, macOS, and Linux.

## PROJECTS/VOLUNTEER

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### Educational Technology and Language Learning

- **Japanese Memory Palace:** Built a Unity3D Virtual Reality Android app with 3D mnemonic techniques for immersive language learning.
- **Lead Instructor at Canada Learning Code:** Taught and mentored class of 30+ women and children in Python, HTML, CSS, and JavaScript.

## EDUCATION

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### B.A.Sc., Computer Engineering (Software Engineering Major)

University of British Columbia • Vancouver, BC • 2019