

Anshul Agrawal

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Work Experience

Lorica Cybersecurity

Toronto, ON

SOFTWARE ENGINEER | DJANGO, C++, CELERY, RABBITMQ, JENKINS, STRIPE, TERRAFORM, TWILLIO, NGINX, AWS

Jul. 2023 - Present

- Designed and implemented the **Django** backend service for a privacy-focused data analytics platform; collaborated with executives and engineering teams to deliver **22+ core features** in a **fast-paced startup environment**.
- Reduced latency** of critical API endpoints **by 94%** through query optimization, caching, and gateway tuning.
- Refactored Jenkins pipelines to parallelize jobs and optimize dependencies, **improving build times by 4x**.
- Integrated **Stripe** for usage-based billing for model deployments. Leveraged various Stripe products to simplify development and achieve smooth integration.
- Contributed to the **implementation of state-of-the-art encryption algorithms** from internal research papers, leveraging a proprietary high-performance polynomial math library — a **flagship feature** of the platform.
- Created automated testing frameworks for unit, E2E, performance, and cypress tests, **improving code coverage to 92%**, reducing development times, and reducing post-deployment bugs.
- Built an ETL pipeline for data ingestion using **Dagster improving upload speeds by 20%** and **pre-processing by 2.5x**; deployed a garbage collection service **reducing storage costs by 50%**.

Goldman Sachs

Toronto, ON

SOFTWARE DEVELOPER INTERN | PYTHON, JAVA, GO, NGINX, ENVOY

Jun. 2022 - Aug. 2022

- Researched API reverse proxies and service proxies that fit with current goals and service architecture.
- Created proof-of-concepts using different configuration types of Envoy proxy and created custom configuration types.
- Integrated Envoy into existing API management platform architecture using Java and Go.
- Created a config generator that converted OpenAPI specifications to Envoy configs and dynamically updated Envoy.
- Enabled easier API provisioning on Envoy by passing of a simple OpenAPI specification.

Department of Computer Science, UofT

Toronto, ON

RESEARCH ASSISTANT | PYTHON, PYTORCH

May. 2022 - Aug. 2022

- Supervisor - Prof. Sebastian Jaimungal
- Understood existing FDA and hyper-parameter tuned existing FPCA.
- Researched and Implemented DCC-GARCH models for covariance prediction and sample path simulation.
- Created data visualizations for estimating and understanding the authenticity of the simulated sample paths.

Department of Computer Science, UofT

Toronto, Canada

TEACHING ASSISTANT - CSC209 · CSC104

Jan - May 2021 & 2022

- Held weekly labs for **30 students** in learning foundational concepts of C programming and Systems programming.
- Led a weekly tutorials for **40 students**. Created working demos in object-oriented programming using Python.
- Corrected student assignments, tests, and final exams. Held weekly office hours.

Netcore Cloud

Mumbai, India (Remote)

SOFTWARE DEVELOPER INTERN | PYTHON, RUST, AWS, KIBANA

May. 2021 - Aug. 2021

- Implemented REST API for bank transaction, and fraud prevention app notifications. Used **AWS Lambda, API gateways, and Go**.
- Reported Performance Monitoring stats revealing expensive operations. Used **Elastic APM and Kibana**
- Wrote client and developer side API documentation enabling client-side IT to easily create http requests reducing developer on-boarding time.
- Built and deployed a Log-Parser to parse every new log file and report rogue clients. **Blacklisted 400 clients a day**

Education

University of Toronto

Toronto, Canada

COMPUTER SCIENCE SPECIALIST · STATISTICS & MATHEMATICS MINOR · HONOURS BSC

Sep 2019 - May 2023

- Focus in **Artificial Intelligence and Computer Vision**.
- GPA - 3.87 / 4.00 (Dean's List Scholar)**
- Relevant courses:
 - Software Design
 - Intro to Databases
 - Operating Systems
 - Neural Nets and Deep Learning
 - Algorithm Design & Analysis
 - Data Analysis I & II

Skills

Languages Python, Java, C, C++, SQL, Bash, R, TypeScript

Libraries/Frameworks Django, Celery, Redis, RabbitMQ, GraphQL, PyTorch, OpenCV, NumPy

Tools Docker, Kubernetes, Git, BitBucket, Jenkins, Stripe, Figma, Twilio, AWS, Azure, Nginx, MySQL