Saai Arora

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EDUCATION

University of Waterloo   Waterloo, ON
Bachelor of Computer Science, Honors Co-op   *Expected – June 2027*
Courses: Algorithms, Object-Oriented Programming, Computer Architecture, Databases, Operating Systems, Networks

EXPERIENCE

Shopify — Software Engineer Intern   September 2025 - December 2025
- Supporting Checkout platform processing 500M+ transactions across **Ruby/Rails**, **GraphQL**, and **Typescript**
- Reduced validation errors by 55% & latency by 20% by unifying React hooks & streamlining GraphQL logic
- Prevented 90+ **E2E** test flakes by implementing a **Ruby Kafka writer** wrapper that suppressed **Monorail** events during test runs.

IBM — Machine Learning Engineer Intern   May 2025 - August 2025
- Built Python **FastMCP** server enabling AI-powered debugging assistant for z/OS via **Model Context Protocol (MCP)**, reducing developer troubleshooting time by 30%
- Contributed to **Kubernetes** open source project through IBM's jump start OSS program with core maintainers
- Integrated dynamic application security testing by containerizing **OWASP ZAP** with **Podman** into **Jenkins CI/CD** pipeline, saving 30+ annual work hours

IBM — Software Developer Intern   January 2025 - May 2025
- Built secure **REST API** endpoints in **Java/JAX-RS** for IMS debugger configuration management for IBM Z/OS client generating $1M+ annual revenue
- Created **CI/CD** pipeline with **Jenkins**, **Linux** and **shell scripting** for deploying **Java** service on hybrid cloud
- Eliminated 50+ security vulnerabilities in **C/C++** codebase using **SonarQube** static analysis

Squeak— Technical Founder ☑   November 2024 - May 2025
- Launched **LLM-driven** language learning platform generating **revenue** with **700+ users**
- Built full-stack infrastructure using **Supabase, React, Go** with **JWT** authentication and **PostgreSQL** storage
- Deployed scalable backend with **AWS Lambda/SQS** and **Terraform** supporting distributed story generation
- Integrated RAG pipeline with **Tavily/GCP** Translation enabling multilingual story output

Autotrader — Software Developer Intern   January 2024 – May 2024
- Built **Linear Regression** model with **Scikit-Learn** delivering analytics to 1,500+ dealerships
- Improved data accuracy by 85% optimizing processing algorithms with **tabula** library
- Automated data pipeline with **Python scripts**, **CLI** tools in **Linux environment**, saving 200+ hours annually
- Processed 5,000+ vehicle records with **Pandas/SQL** on **Redash** providing market insights
- Automated image uploads to 350+ websites with **Python**, saving 200+ hours annually

PROJECTS AND ACTIVITIES

⌗ PickUp | *Express.js, React, Material UI, Docker, AWS* ☑   June 2023 – Present
- Developed web application using **Express.js**, **React** and **Google OAuth** for authentication and user registration
- Deployed **AWS RDS** database infrastructure for storing user data and game records across the platform.

⌗ Caitlyn | *C++, Docker, Intel Embree*   2023 - Present
- Developed ray-tracing renderer using **C++, Embree, CUDA**, optimizing rendering speeds by **53%** using **GPU**
- **Containerized** the application using **Docker**, ensuring seamless deployment across different environments.

⌗ Diamond Predictor | *Python, Matplotlib, NumPy, Seaborn, Pandas, Scikit-Learn*   May 2022
- Developed a **Linear Regression model** using **Pandas and Scikit Learn** to predict diamond prices based on characteristics like cut, color, and clarity.

TECHNICAL SKILLS

Languages: Ruby, Go, Java, Python, C, C++, JavaScript, TypeScript, SQL, HTML/CSS
Frameworks & Libraries: Ruby on Rails, React, Express.js, Django, Bootstrap, MUI, Angular, Intel Embree, Pandas, NumPy, Matplotlib, TensorFlow, Seaborn, Openpyxl
Tools & Platforms: Docker, Kubernetes, Jenkins, Terraform, Git, Supabase, AWS, GCP, PostgreSQL, MongoDB, Redash, OWASP ZAP, Podman, Linux, CI/CD, REST APIs
Other: Jira, Figma, Excel, PowerPoint, Data Analysis, Problem Solving