Vanshika Virmani

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SKILLS SUMMARY

Languages: Python, C, Java, Unix Bash Scripting, Javascript, NodeJS, TypeScript, HTML, CSS, Haskell
Frameworks/Databases: ReactJS, SQL, MongoDB, Neo4j, PostgreSQL, Microservices, Kubernetes, ExpressJS, NodeJS
Tools: Docker, Postman, Latex, Git, Amazon Web Services, Google Cloud Platform

EDUCATION and AWARDS

UNIVERSITY OF TORONTO, ON, Honors Bachelor of Science   *Sept 2020 - April 2024*
   Computer Science Software Engineering Specialist with Minor in Statistics
Dean's List UTSC   *2020 - 2024*
International Scholar Award at UofT (Merit Based - valued at **$225,000**)   *2020 - 2024*
Nokia Next Gen Tech Scholarship (Best Intern Project - valued at **$15,000**)   *February 2023*

EXPERIENCE

Software Developer Engineer @ Amazon Ads   **(Toronto Office)** *May '25 - Present*
- SDE for Amazon MADS (Measurement and Data Science for Advertising Solutions)
- Currently on a data warehousing team, building a backend solution for big-data (in petabytes!) for the Ads Portal

Technical Account Manager (Enterprise Support) - Amazon Web Services (AWS)   **(Toronto Office)** *June '24 - May '25*
- Built TAMBR, a Gen-AI based internal tool that analyses customer data to provide valuable financial, operations and security insights about their AWS workloads. This tool is now used orgwide, boosting TAM productivity by over 30%, by reducing hours spent on customer work
- Oversaw workloads for enterprise customers (some with $35M+ ARR) on AWS, advising on solution architecture, implementation, operations, and cost optimization

Technical Account Manager Intern - Amazon Web Services (AWS)   **(Toronto Office)** *June - August '23*
- Earned AWS Cloud Practitioners and Solutions Architect Associate Certification
- Built a DevOps solution using CI/CD pipeline, blue-green deployment strategy, and a monitoring dashboard for an online translation service. Helped them sync their dev and prod instances, reduce costs, and increase their application availability
- Worked with AWS CLI and multiple services such as: Codepipeline, Codebuild, CodeDeploy, Cloud Development Kit, Elastic Container Registry, Route53, Athena, Kinesis, S3, Lambda, Quicksight, and Cloudwatch

Software Engineer Intern - Nokia (NSP 4LS Team)   **Kanata Office (Remote)** *Sept - Dec '22*
- Developed and tested Bash scripts for Nokia's CN support tools, enabling faster troubleshooting of complex network issues
- Gained hands-on experience with VMs, Linux, and Kubernetes while supporting network operations

RELEVANT PROJECTS

VerboVerse - Real Time Video Calling with Translation   *Nov - December 2023*
- Worked in a team of 3 to create a website that offers users the option to create meetings with video and audio calling option, and performs real time translation of the different languages so that people can overcome their language barriers. It uses **MERN** stack for both frontend and backend, incorporating **WebRTC** for video and audio calling, **Google Translate APIs** for speech-to-text and real-time translation. It integrates **Sendgrid** for email invites and **Memcache** for efficient chat log storage.
- Features I worked on: setting up the backend using **ExpressJS** and **NodeJS**, with **MongoDB** as our database; integrated **Memcache** for translation and chat logs to improve real time system efficiency; used **JWT** *tokens* for user authentication; designed UI for the sign in, signup and home pages; deployed the entire application using **Google Cloud Platform**.

Project 360 - Collaborative 3D Room Editor   *March - April 2023*
- Worked in a team of 3 to deliver a website that serves as a collaborative room editor with a **React** frontend, and **Express** backend. It uses **Auth0** to help users sign in/sign up, **threeJS** for 3D rooms, **SendGrid** for inviting others to collaborate on the room, and **SocketIO** to add, move, rotate, delete furniture pieces in real time. Selected as one of Top 3 projects in the course.
- Fully responsible for setting up the backend, adding the **Auth0** functionality, **SocketIO** for real time collaboration with furniture, **Sentry** for error monitoring, and web audio for enhanced user experience and deployment using **DigitalOcean**

MyBnb Database Design   *August 2022*
- Completed a **Java** database design project in **MySQL** that replicates all functionality of AirBnb, allowing users to sign in as renters or hosts, create listings, search listings according to filters (available dates, location, amenities), make and cancel bookings, generate summary reports for total listings in a location, in a date-range, ranking by top hosts, largest cancellations
- Designed schemas using ER Diagrams and ran MySQL queries to store and process large-scale data as efficiently as possible

Pintos Operating System   *May - August 2022*
- Extended simple operating system framework for 80x86 architecture to support multithreading, user programs with I/O support, virtual memory, and a basic file system
- Gained in-depth understanding of operating systems, and the debugging process in C using the *GDB debugger*

Ok-Zoomer Microservices - REST APIs for Ride-Sharing App   *November 2021*
- Successfully developed RESTful backend APIs for a ride-sharing app, leveraging three containerized microservices with backend Java APIs. Executed seamless CRUD operations across PostgreSQL, MongoDB, and Neo4j databases, crafting efficient REST API endpoints.
- Implemented an intuitive API gateway for user interaction and seamless communication among the three microservices. Used Docker extensively for efficient containerization and individual testing of each microservice.

Doctor's App using Android Studio   *July - Aug 2021*
- Worked in a team to develop an Android App using *Java* and *Kotlin,* that helps users register as doctors or patients; lets patients book medical appointments at the available time slots. Guided the project as *Scrum Master*
- Set up the *Firebase Realtime Database* from the scratch; single handedly implemented the MVP architectural pattern.