Hetav Pandya

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Skills

Programming Languages:	Python, C++, C, Go, Kotlin, JavaScript, Perl, TCL, Bash
Machine Learning:	TensorFlow, PyTorch, AWS SageMaker, Ollama, Docker, Kubeflow
Data Analysis:	PostgreSQL, MongoDB, MySQL, Database Design, Power BI
Additional skills:	Parallel Programming, Linux, Git, GitHub, Perforce, Docker, FPGA

Work Experience

Arista Networks — Vancouver, Canada
Software Developer — June 2024 - Present
- Ensuring seamless integration and performance optimization of Microsoft's SONiC (Software for Open Networking in Cloud) OS on Arista platforms.
- Supporting features and bug fixes reported by GitHub community SONiC users.

Intel Corp. — Toronto, Canada
Software Engineer — May 2022 - May 2023
- Developed a graph-mapping tool in **C++** for Intel's FPGA Synthesis Team in 2022 Q4.
- Implemented IP pin-cache to reduce time taken to compile customer designs by 15%.
- Used profiling tools like **VTune and flamegraphs** to optimize code and identify bottlenecks.

University of Toronto — Toronto, Canada
Teaching Assistant — Sept 2023 - April 2024
- Taught **Linear Algebra** and **Calculus** to engineering students at the Department of Mathematics (UofT).

Bell Inc. — Toronto, Canada
Data Scientist Intern — May 2021 - Aug 2021
- Optimized **MySQL** data queries reducing querying time by 20% on average.
- Developed an automated deep learning pipeline in **PyTorch and Kubeflow** to detect potential flaws in new Fibe TV versions, reducing error detection time from 3 weeks to 15 minutes.

General Motors (GM) — Toronto, Canada
Machine Learning Model Developer — May 2021 - July 2021
- Deployed a real-time object detection model for GM's auto-guided system with 0.93 mAP using **PyTorch**.

Projects

Nash Equilibria convergence using RL *RLib, DQN, PPO, Python* — View Project
Worked with Prof. Lacra Pavel, to develop Reinforcement Learning algorithms that converge to Nash Equilibria in partial information networks like autonomous drone networks and smart power grids.

Open Hansard *Llama3, Ollama, Python* — View Project
An open-source initiative to summarize the debates of the canadian parliament using Llama3 LLM.

PEY Door *Claude LLM, AWS SageMaker, Web Dev* — View Project
A first-place winner in AWS Student Hack, it used a Claude LLM in AWS Sagemaker to answer student's internship related questions using official internship reports submitted by past UofT students.

Asphalt 9 Hands-Free Simulator *Python, OpenCV* — View Project
A computer vision powered gaming interface that allows the user to control and play racing games with hand gestures. A demo test was done on the game - Asphalt 9

E-Motion *Python, OpenCV, Selenium* — View Project
A computer vision suite that enables users to play games, read e-books and listen to music using hand gestures. It secured second prize at UofT Hacks VIII

Education

University of Toronto - GPA: 3.97 — Toronto, Canada
High Honors in Computer Engineering with Artificial Intelligence Minor — Sept 2019 - May 2024
Cumulative average: 92.5%, ranked #2 in UofT Engineering in 2019-20

Linear Algebra: 99/100 | Electronics: 99/100 | Intro. to Machine Learning: 95/100 | Databases: 95/100

Leadership Experience

- Speaker at 'ML in Vancouver' & 'Vacouver ML System Design' Group — May 2024 - Present
- Strategic and Technical Advisor @ UBC AI — May 2024 - Present
- Co-President at UofT Machine Intelligence Student Team — July 2021 - July 2022

Notable Open Source Contributions

- Keras - Deep Learning Library — Link to PR
- Pandas - Python Data Analysis Toolkit — Link to PR
- PettingZoo - Multi Agent Reinforcement Learning Library — Link to PR