VASKAR NATH

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EDUCATION

University of Toronto May 2023
Honors Bachelor of Science in Computer Science, Mathematics, and Statistics GPA: 4.00

Languages	Python, C/C++, Java, JavaScript, HTML, CSS
Technologies	Linux, Google Cloud Platform, Git
Course Work	Analysis I & II, Machine Learning, Probability and Statistics I & II, Software Design, Enriched Data Structures, Object Oriented Programming, Computer Architecture

EXPERIENCES

Amazon | Software Engineer Intern - Vancouver, Canada May 2021 - July 2021

- Incoming Software Engineer Intern at Amazon.

Intel | Software Engineer Intern - San Jose, California May 2020 - Apr. 2021

- Principal researcher in the design and implementation of an automated **machine learning** bug tracker that assigns to proper team and person from 400 teams and over 2000 individuals, utilizing **elastic search** and big data techniques to maintain and update a database of 6 million training data.
- Performing statistical analyses and deploying tools to be used internally by teams to improve efficiency.

University of Toronto | Teaching Assistant - Toronto, Canada Jan. 2021 - Apr. 2021

- Teaching Assistant for CSC 148: Introduction to Computer Science

Vector Institute | Quantum Computing Research Intern - Toronto, Ontario Sep. 2020 - Apr. 2021

- Implemented N-qubit Quantum Fourier Transform using the Tequila Quantum language.
- Analyzing efficiencies of optimization methods to improve accuracy of quantum operators and parallel systems.

University of Toronto | Research Software Developer - Toronto, Ontario May 2020 - Aug. 2020

- Developed and implemented a framework system to probabilistically manipulate benchmark instances, applying delta debugging techniques to minimize bug triggering test instances, utilizing a database of 100,000+ SMT benchmarks.

Alberta Health Services | Statistics Research Intern - Calgary, Alberta May 2019 - Sep. 2019

- Developed novel probabilistic and statistical models, utilizing Markov chain theory, Bayesian statistics, and linear algebra, to incorporate and optimize the Wright-Fisher and Moran generative population models under different biological assumptions in **C++** and **Python**.

PROJECTS

Dance Party | Hackathon Project | devpost.com/software/dance-party November 2020

- Developed a web-application that allows friends to connect online through dancing amidst the pandemic, winning the **2nd Place** and the **TELUS Best Mental Awareness Hack** awards.
- Utilized a **tensorflow** machine learning package **PoseNet** to develop an algorithm for pose similarity score through linear algebra techniques in order judge how well users were following a dance.

Machine Learning Projects | Personal Project | github.com/vaskarnath/ml-projects April 2020

- Created machine-learning models that ranged from **classifying written digits** to **predicting house prices**.
- Implemented K-nearest neighbours, Naive Bayes Classifier, and Condition Gaussian Classifier from scratch.
- Leveraged **Python libraries** to analyze performance of Support Vector Machines, Ada-Boost Classifiers with various different base-classifiers, and MLP.

AWARDS

- Undergraduate Research Award × 2 May 2019, May 2020
- In-Course Academic Scholarship for High Academic Achievement × 2 Apr. 2019, Apr. 2020
- University of Toronto Scholar Entrance Scholarship Sep. 2018