HARSH AGRAWAL

3rd Year Student at University of Waterloo

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SKILLS

Languages Python, C, C++, Octave, MATLAB, R, Bash, SQL, Java, Racket, Haskell

Technologies Linux, Numpy, Scikit-learn, Keras, Git, Pandas, SQL, Android, NLP, Deep Learning, Grafana

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EXPERIENCE

Huawei Technologies Canada Co., Ltd — Jan 2021 - April 2021

Software Engineering Intern, Heterogeneous Compiler Lab

- Tuned options using statistical analysis based on local and online data resulting in **15% improvement** in INT benchmarks and **13%** in FP benchmarks for SPEC CPU 2006.
- Developed SPEC CPU **configuration files** to work along with Jenkins pipeline.
- Designed highly customizable **User Interfaces** in Grafana using PostgreSQL, which are actively used by 2 divisions for daily results.

Nitiraj Engineers Ltd. — March 2019 - May 2019

Software Engineering Intern, R&D Department

- Debugged and **improved performance** of program managing employees' and client's database by 15%.
- Developed and deployed an **anomaly detection program** decreasing shipping of faulty products by a third.
- Assisted in development of **testing software** using C++ in a team of 5 to test engineered products.

PROJECTS

Attendance Manager *C++, Java, Android, SQL*

- Developed software to take attendance for students in schools in C++.
- Designed an application in a team of 4 to provide the necessary UI to instructors and backup data for the school IT dept.
- Software is currently being used for attendance of **more than 10,000 students** during online learning and undergoing trial runs in **6 more schools** in Mumbai.

Spotify CLI *Python, Spotify API*

- Designed software using Spotify's Python API to control Spotify Account from Ubuntu command line.
- Developed a UI for the command line along with features to **add, remove, like, search** songs in the Spotify account playlists.
- Created a **recommendation engine** for users to get similar songs based on search history, artist, popularity, genre, etc.

Noise Reduction Calling *C++, Python, Tensorflow, Keras*

- Built technology to remove noise in **real time** by recognizing human voice based on Deep Learning and digital signal processing algorithms.
- Wrote programs to **transcribe calls** and to **search** the transcriptions using NLP.
- Building an Android app to incorporate this technology to **remove noise during real time calling** and give additional features such as transcriptions and search.

ACHIEVEMENTS

- **Certificate of accomplishment** for Stanford's **Algorithms course** in Coursera (**98%**).
- **Certificate of accomplishment** for Andrew Ng's **Machine Learning** course (**100%**).
- Received a **$15,000 Scholarship** for demonstrating **passion in Computer Science**.

EDUCATION

University of Waterloo **Sep 2019 - Apr 2024 (expected)**

Candidate for Bachelor of Computer Science (3A)

- Cumulative GPA: **90.39%**
- **Excellent Academic Standing** in all terms and **Term Dean's Honours List** in terms 1A, 1B, and 2A.
- Took an active part and demonstrated leadership in 'Coffee N Code' and 'Computer Science Club'.