Harsh Agrawal

h2agrawa@uwaterloo.ca | GitHub/Harshsa28 | LinkedIn/HarshAgrawal

EXPERIENCE

Google   Summer 2022

Software Engineering Intern   C++, SQL, Protobuf, Flume

- Designed an **attribution system** for handling billions of user events to improve retail search results.
- Added support for various attribution models such as Last-Touch, Time-Decay, and Adaptive-Priority.
- Generalized the system to create a **cross-vertical attribution system** for verticals across Google Cloud.

Huawei   Fall 2021

Software Engineering Intern   C++, Python

- Added **multi-threading** to python's big-data library pandas, improving performance by **800%**.
- Collaborated to add **distributed computing** to pandas, allowing it to work on databases of TBs in size.

Huawei   Winter 2021

Software Engineering Intern   C++, SQL, Python

- Developed scripts to analyze and improve GPU compiler, improving benchmarks by **15%**.
- Designed **interfaces** in Grafana using PostgreSQL to visualize the data.

PROJECTS

Realistic Stable Diffusion   Tensorflow, Keras, DL

- Filtered text-to-image AI model outputs based on confidence level of **object detection**.
- Developed a **prompt generator** to create alternate prompts for the text-to-image model.

Attendance Manager   C++, Java, SQL, Android

- Developed an android app to take attendance for students in schools.
- App being used for **10,000 students** during online learning.

Twitter Stock Predictor   Python, NLP

- Correlated tweet **sentiment**, **content** and **volume** of companies and cryptocurrencies to their stocks.
- Created a graphical user interface to visualize the data and results.

EDUCATION

University of Waterloo *Candidate for Bachelor of Computer Science (4A)*   Sept 19 - Jan 24

- GPA : **90.0%**
- **Excellent Academic Standing** in every term.
- Received a **$15,000** Computer Science Scholarship.
- Notable courses: Advanced Object-Oriented Programming, Algorithms and Data Structures, Concurrent Programming, Distributed Systems, Machine Learning.

SKILLS

Languages	C++, Python, C, Java, Rust, Scala, Shell
Technologies	SQL, Git, Protobuf, Tensorflow, Keras, Concurrency, Distributed Systems, Android, NLP