Shivam Ajay Saraf

Github.

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PROGRAMMING SKILLS

- **Languages**: Python, Javascript, C++, C, SQL, Scala, Schema, HTML, CSS3.

- **Technologies**: NodeJS, React, Numpy, Pandas, Spark, SparkSQL, Apache Hadoop, Apache Cassandra, MongoDB, AWS, Mongoose, Jest, Kotlin, Dart, Docker, Airflow, AJAX, Git, Github, Jira, Jenkins, LaTeX.

EXPERIENCE

- **Undergraduate Research Assistant.** Toronto, CA
  Software Developer *September 2020 - Present.*
  - Working under Professor **Srinivasan Keshav** to estimate the lighting load of the largest commercialised buildings in the world.
  - Integrated **Google's Streetview API** with **Python** to automate the process of extracting images with over **100** different **fov's** and **radii.**
  - Utilised **OpenCV** to develop algorithms, based on **ORB and BRIEF**, to estimate the dimensions of the windows in hopes of calculating the **flux** and the **intensity** of light entering the building.

- **Novantas Inc.** Toronto, CA
  Data Engineer *May 2020 - August 2020*
  - **Assisted** in the design and implementation of **Spark Pipelines** that ingest more than 500 GB of data through clients.
  - Extensively used **Scala** and **Spark** to improve the performance and optimization of the existing algorithms/queries in **Hadoop** and **Hive** using **Spark Context, Spark-SQL** and **Pair RDD'S.**
  - Worked on performance tuning in **Hive** and **Impala** using multiple methods such as **dynamic partitioning** and cost based optimization coupled with the creation of several dashboards and worksheets in **Tableau.**

- **Coffee 'N Code** Waterloo, CA
  Senior Project Lead *Jan 2020 - April 2020*
  - Responsible for organising and developing a **4 month course** to educate people of all age groups in the **Python Programming Language.**
  - **Course content** revolved around building strong foundational concepts in **Object Oriented Programming** in order to be comfortable developing **2-Dimensional games** on the platform.

PROJECTS

- **Connec-Ted** Windsor, CA
  Node JS, Twillio. *March 2020*
  - Developed a **bot** that interfaces SMS sent from a client and provides desired **directions** and **news without internet access.**
  - Won the **People's Choice Award** at Winhacks, University of Windsor with over **400** applicants.

- **Chat-Time** Waterloo, CA
  Express, MongoDB, NodeJS, Mongoose. *June 2020*
  - Built a full-fledged web application allowing **real-time chatting** between multiple clients and the server.
  - Inculcated **websockets** to establish connection between various clients and utilized **Mongoose** to store user-authentication details in the **MongoDB Database.**

EDUCATION

- **University of Waterloo** Waterloo, CA
  Bachelors in Computer Science; GPA: 3.8 *September 2019 - Present*