Shivam Saraf

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EDUCATION

University of Waterloo　　　　　　　　　　　　　　　　　　　　　　　Waterloo, Canada
Bachelors in Computer Science; GPA: 3.9　　　　　　　　　　　　　*September 2019 - Present*

Scholarships and Awards: Computer Science International Upper-Year Scholarships, President's Research Award, President's Scholarship of Distinction.

Relevant Coursework: Object-Oriented Software Development, Algorithms, Data Structures and Data Management, Introduction to Combinatorics , Computer Organization and Design, Foundation of Sequential Programs.

SKILLS SUMMARY

- **Languages**:　　Python, Javascript, C++, C, SQL, Golang, Scala, Schema, HTML, CSS3.
- **Tools**:　　　　PostgreSQL, MySQL, SQLite, Docker, GIT, Kubernetes, Jenkins, Jira, LaTeX.
- **Frameworks**:　 NodeJS, Hadoop, Mongoose, Django, Flask, React, Angular, Spark, Cassandra, Airflow, AJAX, Jest.
- **Libraries**:　　 MongoDB, Numpy, Pandas, Scikit, NLTK, TensorFlow, Keras, Socket.io.

EXPERIENCE

University of Waterloo.　　　　　　　　　　　　　　　　　　　　　　Waterloo, CA
Research Assistant　　　　　　　　　　　　　　　　*September 2020 - December 2020*

- Worked 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 Incorporated.　　　　　　　　　　　　　　　　　　　　　　New York, USA
Data Engineer　　　　　　　　　　　　　　　　　　　*May 2020 - August 2020*

- Extensively used **Scala** and **Spark-SQL** to improve the performance of the existing queries by over **92%** and developed **MapReduce** jobs in **Java** for log analysis, analytics and data cleaning.
- Assisted in the design and implementation of **Spark Pipelines** that ingest more than **500 GB** of data daily through multiple clients.
- 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.**
- Developed, maintained and deployed models in **PMML** by writing scripts in **Python** that acquire data from more than **10,000** sources. Developed **MapReduce** jobs in Python for Machine Learning and Predictive Analysis in **Hue** on **AWS**.

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 **Python.**
- **Course content** revolved around building strong foundational concepts in **Object Oriented Programming** in order to be comfortable developing **2-Dimensional games** on the platform.
- Reduced needed budget for future events by **10%** due to a record turnout of over **500** people coupled with a streamlined and an improved project process flow.

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.**