Shivam Vats

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PROFESSIONAL EXPERIENCE

Leeds School of Business, University of Colorado Boulder — Aug 2023 – Present
Data Scientist *[dashboards]*

- Built **tableau** dashboard for Colorado Marijuana Division to analyze business metrics such as sales and prices.
- Revamped the tableau dashboard of Colorado Secretary of State making it accessible to people with disabilities.
- Reduced quarterly update time for Colorado Restaurant Association dashboard crafting a data ingestion script.

Dish Networks, Colorado, United States — May 2023 – Aug 2023
Data Science Intern *[work-sample]*

- Reduced response time of potential network outages by architecting a **real-time monitoring** data **ETL** pipeline.
- Transmitted the video streaming key performance indicators from android devices to **NoSQL** database, that were pulled to **Grafana** and Tableau dashboards. Experimented detection of anomalous patterns of data via isolation forest

Amazon Web Services, Hyderabad, India — Feb 2020 – Aug 2022
Software Development Engineer

- Shrunk the average time to debug a ticket by **18%** by designing a React-Redux application for support engineers.
- Simulated an interactive representation of client infrastructure to accelerate designing of security policies in AWS accounts.
- Optimized an **NLP** regression model reducing the error metric by **50**% utilizing data cleaning and feature engineering.

PROJECT AND RESEARCH EXPERIENCES

Song Recommender System [website] — Aug 2022 – May 2023

- Engineered a song recommendation application built on Flask. Curated an ETL pipeline collecting data via Spotify API, storing, and modelling it on **Postgres** and performed EDA in tableau. Generated recommendations on GCP **PySpark**.

Color Pop [App] — Aug 2023 – Dec 2023

- Developed an **image segmentation** app to incorporate color-pop effect by separating human figures from background.
- Leveraged UNET with transfer learning to train the model via **TensorFlow** and deployed the app on **Streamlit**.

CU Course Similarity [website] — Jan 2023 – May 2023

- Discovered similar courses offered at CU Boulder using semantic analysis of course descriptions, helping administration uncover connections across departments. Adapted BERT to compute sentence embeddings and stored it in **MongoDB**.
- Visualized similarity scores among courses with network visualization graphs.

Furnace Maintenance Prediction [website] — Jan 2022 – May 2023

- Programmed **time series classification** model to predict when a metal furnace needs maintenance with 93% accuracy.
- Used supervised learning along with time-lag features via logistic regression, decision trees, random-forest and xg-boost.

ACHIEVEMENTS AND ONLINE PUBLICATIONS

Winner – Smart India Hackathon — Mar 2019

Led a team of six to develop an application to sell farm produce online, book crop storage facilities, and logistics services. Helped in initiative to cut middlemen from crop related transactions, by submitting the proof-of-concept to **Indian government**.

Data Driven Video Streaming (published in association with Dish Networks**) –** [Medium Article] — Aug 2023

Harnessing android app for real-time **video stream analytics** and network health enhancements through machine learning.

3 Effective Steps to Conquer Semantic Analysis – [Medium Article] — Aug 2023

Find identical courses at University of Colorado Boulder leveraging network visualizations and hierarchical clustering.

EDUCATION

University of Colorado Boulder, **MS Data Science** — Aug 2022 – May 2024

Guru Gobind Singh Indraprastha University, **B.Tech Computer Science** — Aug 2016 – May 2020

SKILLS

- Programming/Frameworks: Python, SQL, Redshift, BigQuery, QuickSight, Athena, S3, EC2, Lambda, Docker, Excel
- Certifications**:** Deeplearning.AI, AWS Solutions Architect Associate, Data Science and Machine learning in Python