Shivam Vats

720–761–0049 | shivam.vats@colorado.edu | GitHub | LinkedIn | Website | Medium

PROFESSIONAL EXPERIENCE

Dish Networks, Colorado, United States — May 2023 – Aug 2023
Data Science Intern – Product Research and Development [link]

- Utilized tableau dashboards to reduce the response time of potential outages by **20%** and communicated the statistics of video streaming to the networking teams.
- Architected **real-time monitoring** data pipeline for video streaming key performance indicators (KPIs). Transmitted data from android application to an InfluxDB database, that is further pulled by Grafana for real time analytics.

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

- Designed and developed React-Redux application for customer support engineers reducing average time taken to debug an AWS Organizations ticket by **18%**.
- Optimized an NLP regression model reducing the error metric by **50**% utilizing data cleaning and feature engineering. Scored customer's sentiment on a scale of 0-100 on data collected from over 5000 support tickets.

Leeds School of Business, University of Colorado Boulder — Aug 2023 – Present
Research Assistant [dashboards]

- Automated data collection using Bureau of Labor Statistics API in R, shrinking down the 48 hours timespan to **2 hours**.
- Built tableau dashboard for **Colorado Restaurant Association** to communicate employment and wage statistics.

PROJECT AND RESEARCH EXPERIENCES

Color Pop [colorpop.streamlit.app] — Aug 2023 – Dec 2023

- Developed an image segmentation application 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.

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 engine.

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 sentences with NetworkX graphs.

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

- Programmed time series classification model to predict when an aluminium furnace requires 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. Initiated an impactful step 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, **Masters in Data Science** — Aug 2022 – May 2024
GGSIPU, **Bachelor of Technology in Computer Science** — Aug 2016 – May 2020

SKILLS

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