Shivam Vats

720–761–0049 | shivam.vats@colorado.edu | GitHub | LinkedIn | Website | Boulder – 80303

EDUCATION

University of Colorado Boulder   Aug 2022 – May 2024
Masters in Data Science
Relevant Coursework: Statistical Methods and Applications, Data mining, Machine Learning

University School of Information, Communication and Technology, New Delhi   Aug 2016 – May 2020
Bachelor of Technology in Computer Science   GPA - 8.27

SKILLS

- **Programming Languages:** Python, R, R-Markdown, SQL(MySQL, Postgres), NodeJs, ReactJs, Mongo, HTML, CSS.
- **Data Analysis:** Pandas, Numpy, Scikit-learn, Keras, Tidyverse, Matplotlib, Seaborn, Tableau, GeoPandas, Selenium, Flask
- **Certifications:** Deeplearning.AI, AWS Solutions Architect Associate, Data Science and Machine learning in Python

PROFESSIONAL EXPERIENCE

Amazon Web Services, Hyderabad, India
Software Development Engineer – 1   Jul 2020 – Aug 2022

- Designed and developed React-Redux application for customer support engineers reducing the average time taken to debug an AWS Organizations ticket by 18%.
- Built an NLP regression model to score customer's sentiment on a scale from 0 to 100 using the data from support tickets. Leveraged NLTK and naive-bayes packages in python and improved the accuracy to 75% utilizing TF-IDF.
- Assisted 200+ customers in real-time via calls and chats to debug security and monitoring components of cloud applications. Solved 700+ tickets on services like Amazon Cognito, S3, IAM, EC2 and performed 90+ quality reviews of problem solving.

Software Development Intern   Feb 2020 – Jul 2020

- Automated the monitoring of authentication events of Cognito users facilitating security compliance and disaster management.
- Used agile development along with services such as AWS Lambda, CloudFormation and CloudWatch to build the back end.

Marsplay, New Delhi, India   May 2019 – Jul 2019
Full Stack Web Developer Intern

- Built search engine optimization scripts in NodeJS that increased weekly average number of visits to website by 10%.
- Tackled unauthorized access to the website by devising a mechanism that automatically blacklist unused JSON Web Tokens.

PROJECT EXPERIENCES

Song Recommender System [link]   Aug 2022 – Present
- Gathered track's and artists' data from Spotify Web API. Modelled the data using PostgreSQL and pipelined it into Tableau to create interactive visualizations. Engineered features leveraging TF-IDF vectorizer on genres of songs.
- Implemented PCA to facilitate Kmeans, KMedoids clustering and used content-based filtering to generate recommendations.

Its Ronaldo [link]   Aug 2020 – Dec 2020
- Performed data analysis and machine learning on game statistics of Cristiano Ronaldo. Cleaned, analyzed, and visualized data using Numpy, Pandas, Matplotlib, and Seaborn. Conducted PCA along with multivariate analysis for feature selection.
- Implemented logistic regression, SVM, random forests, and KNN using scikit-learn to classify if a shot is converted to a goal.
- Architected deep neural network leveraging Keras and performed hyper-parameter tuning using scikit-learn. Applied the concept of cyclical learning rates to improve the accuracy of classification by 10%.

Sahayata [link]   Aug 2020 – Dec 2020
- Programmed data scraping scripts using Selenium and BeautifulSoup to mine rice crop data from the year 2001 to 2012.
- Engineered ETL pipeline in python and performed visualizations using Matplotlib and Tableau to garner trends and patterns.
- Studied the performance of machine learning algorithms such as linear regression and decision trees. Performed time series analysis on the crop price data to garner seasonality and trends.

Bon Appetit [link]   Jun 2019 – Aug 2019
- Analyzed over 9000 Indian restaurants' cuisines, ratings, and demographics. Mined data using Zomato's API in python.
- Cleaned and transformed the data using Pandas and leveraged gaussian kernel density estimate to visualize the distribution of numerical features such as average cost. Displayed the ratings of restaurant grouped by states leveraging GeoPandas.

ACHIEVEMENTS

Winner – Smart India Hackathon   Mar 2019

Led a team of six persons to curate an application that reduces exploitation faced by farmers due to middlemen. Developed mobile and web application with ReactJs and NodeJs to sell produce online, book crop storage facilities, and logistics services.