Shivang Dubey

Email : shivangdubey2001@gmail.com
Linkedin: linkedin.com/in/shivangdubey8
Mobile : +91-9717428962
GitHub: github.com/shivangdubey
Portfolio: shivangdubey.github.io

EDUCATION

Guru Gobind Singh Indraprastha University — BPIT, Delhi
B.Tech. in Electronics and Communication Engineering; CGPA: 9.48/10.00 — *Aug 2019 - Jul 2023*
Courses: Analog Electronics, Data Structures and Algorithms, Digital Signal Processing, Digital Communication, Database Management System

Indian Statistical Institute — Remote
Winter School on Deep Learning — *Jan 2023 - Mar 2023*

SKILLS SUMMARY

- **Languages**: Python, SQL, MySQL, C/C++
- **Tools & Frameworks**: Machine Learning Libraries (PyTorch, Tensorflow, KERAS, scikit-learn) Data Engineering Tools (**Apache Airflow**, **pgAdmin**, Snowflake, Power BI, MySQL Workbench, Amazon S3, Selenium, BeautifulSoup4 (bs4)), Version Control (GIT, GitHub), Data Analysis Tools (Pandas, NumPy, Excel), OpenCV, Amazon Redshift
- **Key Skills**: Machine Learning (Regression, Classification, Supervised Learning) Deep Learning (CNNs, RNNs, Reinforcement Learning (DQL)), Data Engineering/Visualization/Analysis (Tableau, Seaborn, Excel, Google Dashboard, Colab), Technical Content, Computer Vision (Medical Image Analysis, Image Processing)

EXPERIENCE

ZS Associates — Pune, India
Business Technology Solutions Associate — *Sep 2023 - Present*

- Played a key role in an Operations and Enhancement Project for the world's **6th** largest biomedical company, driving the optimization of data processes and systems. Designed, built, and enhanced multiple **ETL** pipelines critical to the project's success.
- Conducted routine data manipulation and insight generation using SQL, with a focus on PostgreSQL and Workbench. Managed data ingestion and extraction via Amazon S3.
- Automated backup processes on Amazon S3 using Python and **boto**, reducing manual effort by approximately **8 hours** per week. Streamlined operations and reporting workflows using Apache Airflow, saving an additional 4 hours weekly.
- Developed Excel automation solutions using VBA, eliminating a **12-hour** weekly manual process for data fetching, formatting, and analysis. Created VBA-driven Excel reports linked to PostgreSQL databases, enhancing team efficiency by approximately **80%**.
- Acquired foundational hands-on experience with **MicroStrategy**, focusing on data reporting and visualization to drive actionable insights.

Polytechnique Montréal — Montréal, Canada
Summer Research Intern — *May 2022 - Jul 2022*

- Collaborated with a PhD student to develop a **Deep Q Learning** model for a network intrusion detection system. The obtained accuracy was greater than **79%**.
- Built machine learning models for the same **Network Intrusion Detection System**, including **Support Vector Machine, Random Forest Algorithm**, and **Convolution Neural Network**, and compared the results to the Deep Q Learning model using **Tensorflow**.
- Compiled the analysis and found that **Deep Q Learning performed better** than other ML models on the same dataset, with an accuracy difference of **2%**.

ACADEMIC PROJECTS

- **COVID-19 Detector**: COVID-19/Infected cases were detected using a positive case and a normal case image dataset.
    - **Tech**: **CNN Classifier** (Sequential) trained using **KERAS**, data preprocessed using **NumPy**
    - **Outcome**: Optimised using **Gradient Descent**; Accuracy more than **93%**.
- **Social Distancing Violation Detection System**: The model was created to detect human and distance violations between two human centroids along with human face detection.
    - **Tech**: Model trained using **YOLO** (v3) algorithm and weights, along with COCO dataset for pre-existing object classes. **OpenCV** for face and human detection. Along with **SciPy's** Euclidean Distance for human centroid formation.
    - **Outcome**: With a suitable detection rate, the model draws a box around the human; Accuracy more than **94%**. Thesis

AWARDS AND ACHIEVEMENTS

- **ZS Impact Award**: Recognised at ZS for making a dynamic contribution to the project, involved Data Analysis and Targeting
- **Mitacs Globalink Research Internship Award**: Positioned as a Research Intern at a Canadian University with funding
- **Smart Indian Hackathon 2022 College Finalist**: Top-10 in college to represent the team in additional SIH rounds

POSITION OF RESPONSIBILITY

- **Author - Open Source Contribution**: Contributed to SymPy's GitHub repository for enhancement and deployment