

Shivang Dubey

LinkedIn: [linkedin.com/in/shivangdubey8](https://www.linkedin.com/in/shivangdubey8)

GitHub: github.com/shivangdubey

Email : shivangdubey2001@gmail.com

Mobile : +91-9717428962

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
Areas: Perceptrons, Deep Learning Libraries, CNN, Deep Q Learning, Optimisation Techniques, Medical Image Analysis, Self Supervised Learning

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
 - Contributed to an **Operations and Enhancements** Project for the world's **6th** largest biomedical company, focusing on optimizing data processes and systems.
 - 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%**.
- Polytechnique Montréal** Montréal, Canada
Summer Research Intern May 2022 - Jul 2022
 - Reinforcement Learning:** 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%**
 - Comparative Analysis:** 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**.
 - Outcome:** 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