Shivang Dubey

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Education

- **Guru Gobind Singh Indraprastha University** — BPIT, Delhi
  B.Tech. in Electronics and Communication; CGPA: 9.50/10.00 — *Aug 2019 - Jun 2023*
  Courses: Analog Electronics, Data Structures and Algorithms, Digital Signal Processing, Digital Communication, Database Management System
- **Mount Abu Public School** — Delhi, India
  High School; Grade: 80.20/100.00 — *Apr 2018 - May 2019*

Skills Summary

- **Languages**: C++, C, Python, SQL
- **Tools**: GIT, Matlab, PyTorch, Tensorflow, KERAS, OpenCV, scikit-learn , LaTeX, BeautifulSoup4 (bs4), Selenium
- **Key Skills**: Data Science (Analysis-Mining-Visualization), Web Scraping, Machine Learning, Deep Learning, Research

Experience

- **Polytechnique Montréal** — Montréal, Canada
  Summer Research Intern - Prof. Soumaya Cherkaoui — *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
- **Indian Institute of Technology Delhi** — Remote
  Research Intern - Prof. Biswajita Parida — *Jun 2021 - Aug 2021*
  - **Qualitative Data Analysis**: Researched over 150+ companies/start-ups to identify the reason of failures and successes of its products in market. Modeled case study about a product to assist in boosting its reach by numerical and qualitative analysis
  - **Case Study**: Forecasted increase in the sales by applying 'Segmentation, Targeting and Positioning' model and 4Ps framework
- **Tiffinia - Start-Up** — Remote
  Python Developer Intern — *Jan 2021*
  - **Data (Pre)Processing**: Contributed to the datasets Food/Conglomerate. Implemented the PCA technique for dimension reduction. The data learning curve was created with greater than **93%** accuracy
  - **Data Visualization**: The data was visualised in accordance with the models used, using the Python libraries Matplotlib and Seaborn, for better data analysis and prediction

Academic Projects

- **COVID-19 Detector**: COVID-19/Infected cases were detected using a positive case and a normal case image dataset. Gradient Descent and CNN Classifier were used to optimize the process. (Deep Learning and Model Training using KERAS and CNN Algorithm. Accuracy more than **90%**)
- **Face Recogniser**: Created the model to detect both live and static faces. The model draws a box around the face with a suitable detection rate (Model Detection model trained using OpenCV and Cascade Classifier Algorithm. Accuracy more than **97%**)
- **Online Grocery Store Scraper**: Data was scraped from all products on the online grocery store, including Price, Description, Quantity, and Brand, and saved in a reusable format for Data Analysis and operations

Awards and Achievements

- **Mitacs Globalink Research Internship**: Fully funded research internship position at a Canadian university
- **Smart Indian Hackathon 2022 College Finalist**: Top-10 in college to represent the team in additional SIH rounds
- **Break the Shackles 3.0 Finalist**: Finalist in inter-college technical hackathon organised by the college and IEEE

Position of Responsibility

- **Author - Open Source Contribution**: Contributed to SymPy's GitHub repository for enhancement and deployment
- **Volunteer**: Feb 2021- Sep 2021 **PyCon India 2021** Pythonistas' Largest Conference in India
- **Mentor**: Aug 2020 - Sep 2022 **HashDefine** College Technical Society; Mentored students in a variety of software development-related fields, such as artificial intelligence

Interests

- **Computer Science**: Reinforcement Learning, Natural Language Processing, Algorithms, Theoretical Computer Science