Harsh Yadav

Email: harshyamsc23@cs.du.ac.in
Mobile: +91-995-344-6612

Portfolio: harshyadav.me
Linkedin: linkedin.com/harsh-yadav-882189195
Azure, GCP, Medium

EDUCATION

- **Master of Science - Computer Science**   Delhi, India
  Department of Computer Science, Faculty of Mathematical Sciences, University of Delhi   *2023 - 2025*

- **Bachelor of Science - Physics, Mathematics, Computer Science**   Delhi, India
  *Maharaja Agrasen College, University of Delhi, **CGPA: 8.0***   *2020 - 2023*

- **Vivekanand International Sr. Sec. School - Class-XII**   New Delhi
  CGPA: 8.9   *2019 - 2020*

- **Vivekanand International Sr. Sec. School - Class-X**   New Delhi
  CGPA: 9.1   *2017 - 2018*

SKILLS SUMMARY

- **Interests**:   Computer Vision, NLP, CNN's, Large Language Models
- **Languages**: Python, MySQL
- **Libraries**: RegEx, textblob, scikit-learn, tensorflow, matplotlib, pandas, NumPy, seaborn, snscrape
- **Platforms**: Azure, GCP, Jupyter Notebook, Kaggle Notebook, VS Code, Google Colab, Anaconda, Github

EXPERIENCE

- **Data Science Intern**   Remote
  Oasis Infobyte (Internship)   *March 2023 - April 2023*
  - **Flower Classification**: Trained a machine learning model that can learn from the measurements of the Iris flower species and classify them into: **Setosa, Versicolor, Virginica.**
    Tech: Pandas, Matplotlib(scatterplot, pairplot, histogram), Logistic Regression.

PROJECTS

- **Freezing of Gait in Parkinson's Disease (Decision Tree, K-NN, LGBM, Random Forest, Bayes Classifier, XGBoost, Azure)**: Developed a robust Parkinson's Freezing of Gait (FOG) detection system using machine learning models trained on data collected from **wearable 3D lower back sensors**. Implemented a combination of **downsampling** and **synthetic data generation** techniques for dataset balancing, achieving notable results. Demonstrated superior performance with **Decision Tree** for the **defog dataset** and **Random Forest** for **tdcsFOG**, offering valuable insights into the occurrence and triggers of FOG episodes in Parkinson's patients.
  *Completed under the guidance of **Dr. Bharti Rana** (Assistant Professor, DUCS).*   (Dec'23)

- **Sign Language Translation System (Computer Vision, OpenCV, Transfer Learning)**: Developed a sign language detection system using transfer learning with **TensorFlow's SSD_mobilenet_v2** pre-trained on the Microsoft COCO dataset for object detection. Created a **custom dataset** with ten annotated images per class to fine-tune the model, integrating **OpenCV** for image capture. The model exhibited **real-time** classification accuracy on a live video feed, validated through successful peer evaluations, highlighting its adaptability to diverse scenarios.
  *Completed under the guidance of **Dr. Punam Bedi** (Senior Professor, DUCS).*   (Dec'23)

- **Knowledge Graph using Social Media Posts (Web Scraping, NLP, Sentiment Analysis, Flask, Graph Database)**: Made a WebApp using Flask which can **scrape the Tweets** on various parameters (such as keyword, since, till, count, etc.), cleans them using RegEx, **Analyses and Classifies their Sentiments** using TextBlob library, visualises the results using matplotlib, I then stored this classified data into **neo4j database** to obtain **Knowledge Graph** for further Quering and Analysis.
  Tech: Python, pandas, TwitterWebScrapper, RegEx, TextBlob, neo4j, Flask.   (Apr '23)

EVENTS ATTENDED

- Workshop on **Research Opportunities in Computer Science**, hosted by **IIIT Delhi & ACM India** in Nov'23.
- Google Developer Students Club (GDSC) **WoW Delhi-NCR** 2023, hosted by GBU in Apr'23.
- **Data Science Meetup** organized by **GDG Noida** and **Neo4j** in Mar'23.

CERTIFICATIONS

- **START Programme,** Exam Grade: A (Indian Space Research Organisation)
- **How Google does Machine Learning** (Coursera)
- **LLM's and Generative AI with Google Cloud** (Udacity)
- **Machine Learning,** Grade Achieved: 96.07% (Stanford Online)
- **Azure Data Scientist Challenge** (Microsoft Learn)
- **Data Without the Degree** (Google Arcade)
- **Artificial Intelligence Virtual Experience Program** (Cognizant)
- **Predictive Analytics** (IIM Bangalore)
- **NLP with Hugging Face Transformers** (Linkedin Learning)
- **Statistics Foundation 1** (Linkedin Learning)
- **Statistics Foundation 2** (Linkedin Learning)
- **Python** (Kaggle) ....+10 more.

ACHIEVEMENTS

- **Winner** of **Innovasion 4.0 @ CYNET'23** organized by JIMS (*GGS Indraprastha University*).
- **Runner up** of **Inventhon @ CONTRIVANCE'23** organized by MacStak-MAC (*University of Delhi*).
- **Winner** of **Hackathon @ TECH-MELANGE'23** organized by Eniac-SRCASW (*University of Delhi*).

MEMBERSHIP

- Active Member of Department of Computer Science **(DUCS) Research Club.**

OPEN-SOURCE CONTRIBUTION

- Merged my two projects into **Krish Naik's** Repo: The Grand Complete Data Science Materials. (**Proj1**, **Proj2**)

VOLUNTEER EXPERIENCE

- **Hosted Junior's Orientation (MAC-PSCS Department):**
  Briefed about Academic and Extracurricular opportunities at MAC, on being invited by dear Professors of the Department.

- **Umpire, Aaraz Sports & Leisures Badminton Tournament 2023:**
  Served as an Umpire and Judged 40+ badminton matches across Age categories (U13, U15, U25, A35).

- **Co-captain, MAC Badminton Team:**
  Organized and managed Intra-College matches and team selection tournament with 150+ participants.

- **Coordinator-Planning Team, Scintilla'23 (Annual Departmental Fest):**
  Led Planning and Execution of Extempore event with 200+ participants.

- **Volunteer-Technical Team, Contrivance'23 (Annual Technical Fest):**
  Volunteered smooth functioning from behind the stage with 5 competitions and 70+ teams in total.