SHIVANG DWIVEDI

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GitHub | **Linkedin** | **Portfolio**

Education

Lord Buddha Public School — Kota, Rajasthan
12th CBSE — July 2021 - July 2022
Percentage: 80.8%

VIT Bhopal University — Bhopal, Madhya Pradesh
Computer Science Bachelor of Technology — July 2022 - July 2026
CGPA: 8.87

Experience

NULL chapter | **Co-Lead** — Bhopal, Madhya Pradesh | Jan 2024 - Feb 2025

- Applied data analytics to cybersecurity challenges, identifying attack patterns and optimizing CTF challenge difficulty based on participant performance.
- Automated data-driven decision-making for event organization, using insights from past CTFs to design more engaging and challenging competitions.
- Utilized Python, Pandas, and visualization tools to analyze cybersecurity event metrics, improving participation strategies and learning outcomes.

GirlScript Summer of Code | **Contributor** — Bhopal, Madhya Pradesh | May 2024 - Aug 2024

- Collaborated with developers worldwide, participating in pull requests, issue discussions, and code reviews.
- Enhanced coding skills and version control proficiency, working with Git, GitHub, and diverse tech stacks in real-world projects.

Skills

Programming Languages:	Python
Libraries/Frameworks:	NumPy, Pandas, Sklearn
Tools / Platforms:	Git, VS Code, Linux
Databases:	MySQL

Projects / Open-Source

Typing Trainer with Data Analysis | **Link** — *Python, Pandas, Tkinter*

- Developed a Typing Speed Trainer application using Python and Pandas for performance tracking and data analysis.
- Implemented randomized sentence generation based on difficulty levels to assess typing proficiency.
- Designed a time-based typing test that calculates Words Per Minute (WPM) and accuracy rate.
- Utilized Pandas for data handling, storing user performance metrics and enabling structured analysis.
- Integrated a 21-day progress tracking system, allowing users to analyze trends and improvements via an external script.

Text_Editor_with_Word_Prediction | **Link** *Jupyter Notebook, Python, TensorFlow, NumPy, Tkinter*

- Developed an AI-powered word prediction system using an LSTM model with TensorFlow for real-time next-word suggestions.
- Integrated Pandas for data handling and performance tracking, enhancing user interaction with predictive text.
- Implemented rich text formatting features (bold, italic, underline, case toggling) using python-docx for structured document export.
- Designed a customizable UI with light/dark mode switching and font selection for improved accessibility.
- Provided a training script for fine-tuning the LSTM model with custom datasets, ensuring adaptability and enhanced prediction accuracy.

SENTIMENT_ANALYSIS-for-BENGALI-LANGUAGE | **Link** *Python, NLTK, RegEx, Scikit-Learn*

- Implemented text preprocessing pipeline using NLTK and regex to clean Bengali text and remove stop words.
- Developed a machine learning-based sentiment classifier using Scikit-Learn for predicting sentiment polarity.
- Utilized Pandas and NumPy for efficient data handling, storage, and preprocessing.
- Designed a GUI using Tkinter for user-friendly sentiment analysis input and visualization.
- Enabled dataset-driven training with customizable models, allowing fine-tuning for improved accuracy.

Certifications

- Cloud Computing - **Swayam NPTEL**
- Python - VITyarthi by VIT University.
- AI and ML - VITyarthi by VIT University.