SHASHANK SHEKHAR SINGH

ACADEMIC PROFILE

Degree/Certificate	Institution	Percentage/CGPA	Year
B-Tech	Mechanical Engineering IIT (BHU), Varanasi	8.17	2026
CBSE (XII)	PRAGATI PUBLIC SCHOOL, KOTA	93.60	2022
CBSE (X)	LITTLE FLOWER HOUSE, KAKARMATTA, VARANASI	97.20	2020

SKILLS

- **Languages :** Python, C, C++, HTML, SQL, XML, JS, SQL, Dart, LaTeX
- **Areas of Interest :** Machine Learning, Natural Language Processing, Data Science, Large Language Models, Computer Vision, Generative AI, Web Development, Data Structures and Algorithms
- **Tools/Frameworks :** Tensorflow, Keras, PyTorch, NumPy, Pandas, Scikit-learn, OpenCV, Matplotlib, Huggingface, Google Colab, Jupyter Notebook, Excel, SQLite3, Flask, Unix Shell, Linux, Git/GitHub, Docker, Canva

INTERNSHIP/TRAINING

Google Summer of Code (GSoC) 2024　　　　　　　　　　　　　　　　　　　　May'24 - July'24

ML Intern at HumanAI Organization

- Implemented a **CRNN (Convolutional Recurrent Neural Network)** architecture for text recognition in **historical Spanish documents** and applied data augmentation techniques for better performance.
- Fine-tuned the model parameters, enhancing processing speed and accuracy with significantly reduced error rates.

Linux Foundation Mentorship (LFX) 2024　　　　　　　　　　　　　　　　　　May'24 - July'24

ML Intern at Linux Foundation and Networking

- Developed **NLP-based** techniques to **anonymize** sensitive information in **telecom data**, ensuring privacy compliance.
- Implemented automated pipelines for data pre-processing, anonymization, and validation of large-scale datasets.
- Integrated **open-source** tools and frameworks to enhance the scalability and efficiency of the anonymization process.

Blue Yonder (formerly JDA Software)　　　　　　　　　　　　　　　　　　　　May'24 - July'24

ML/DS Intern at BY Office, Hyderabad

- Developed a **Fashion Trend prediction model** using **Transfer Learning** on historical sales and social media data.
- Engineered features like seasonal trends, colour, category, and style to improve the model's performance.

Summer of Bitcoin (SoB) 2024　　　　　　　　　　　　　　　　　　　　　　　May'24 - July'24

Software Development Intern at Libbitcoin Organization

- Designed and implemented a **SQLite database** in **C++** for libbitcoin, optimizing storage and retrieval.
- Developed scripts and APIs to efficiently query, interact and manage blockchain data.

PROJECTS

Tabluar data analysis tool　　　　　　　　　　　　　　　　　　　　　　　　　Nov'23 - Present

- I have built the [chatbot](#) using **Python, Flask, Gemini API, and SQLite3** database. It is a Flask (Python) based Web application hosted on **Google Cloud Services.**
- It is a multilingual, responsive tool for tabular data analysis with a friendly UI/UX, capable of efficiently processing and analyzing handwritten or printed table images, supporting multiple table schemas, and performing CRUD operations.

Dark Pattern Detection with Transformer-based Models　　　　　　　　　　　　Jan'24 - Feb'24

- Engineered a Python script leveraging fine-tuned transformer-based models **(BERT, XLNet, RoBERTa)** to detect and categorize dark patterns in textual data.
- Extended functionality with a **[web plugin](#)** for visual highlighting of deceptive design elements, enhancing user interface analysis and empowerment tools.

Visual Question Answering System　　　　　　　　　　　　　　　　　　　　　Nov'23 - Dec'23

Inter-IIT preparatory task

- Developed a Visual Question Answering (VQA) [model](#) tailored for radiology datasets, enhancing diagnostic accuracy by enabling precise query-based image analysis.
- The multi modal model consists of an LSTM (long short term memory) layer for text recognition and a Dense layer for image analysis.

CERTIFIED COURSES

- Some Diploma Certificates issued by Blue Yonder (JDA Software) : [GDPR Diploma](#), [Information Diploma](#), [Phishing Diploma](#), [Reporting Concerns Diploma](#), [Ant bribery Diploma](#), [Modern Slavery Diploma](#)

- CSO-101: Computer Programming - Basics of algorithmic thinking and problem-solving through programming.
- MA-101: Engineering Mathematics-I - Introduction to calculus, Real analysis.
- MA-102: Engineering Mathematics-II - Advanced topics in calculus, complex analysis, and linear algebra.
- MA-201: Numerical Techniques - Methods like interpolation, numerical integration, and solving linear systems.

POSITION OF RESPONSIBILITY

COPS (Community of Programmers), IIT BHU
July'23 - Present

CTRL SHIFT Intelligence Coordinator | CSoC IG Lead Organizer

- Speaker at **"Introduction to Neural Networks"** Workshop and coordinator at 4 other workshops on ML.
- Mentored numerous students, organized a Machine Learning track for CSoC '24 and CTRL SHIFT Intelligence '24.
- Organized the web3 track for CSoC '24 and mentored students in the DebugIt '24 competition.

Robotics Club, IIT BHU
July'23 - Present

Core Team Member| Summer and Winter Camp Coordinator | Maintainer of the GitHub Repository

- Coordinator at Mazex (Line following Robot) and Organizer of ROS (Robot Operating System) Installation fest.
- Conducted workshops on **"Introduction to AI/ML"** and **"Introduction to Computer Vision"** and mentored students about robotics and AI.

Astronomy Club, IIT BHU
July'23 - Present

Core Team Member | ML team | Web Development Team | Hardware Team | Yuri's Night Executive

- Developed the Astronomy Club's Website and a Bluetooth controlled Star tracking device and a mobile app.
- Invited to the Sasan Power Plant, MP as a part of the Astronomy Club to deliver a speech about Astronomy.
- Event Executive, Problem Setter at the Planet Hunt (ML Event in Yuri's Night) and developed the Yuri's Night website.

HONOURS AND ACHIEVEMENTS

- **First prize** in the NLP.py competition at Optima, IIT Kharagpur, excelling in a national-level ML competition.
- Emerged as the **National Winner** at the prestigious Crystal Ball event organized by Blue Yonder Company.
- Ranked **9th** in Uttar Pradesh State in the National Talent Search Examination (NTSE) Stage 1 2020.
- **Pre-Finalist** for the third and penultimate round of the Tata Imagination Challenge 2023.
- Placed **52nd Nationally** in the quiz round of MachineKnight Season 02 organized by the TechBairn company.
- **Finalist** at the Grand Finale of the GoI's Dark Patterns Buster Hackathon (DPBH-2023) held at IIT(BHU).
- Secured **first runner-up** position at Ikigai's Low Code ML competition held at IIM Ahmedabad.
- Problem Setter for ML Problem Statement and member of the organizing team for **DeepLearn 2024 11th International School** on Deep Learning (and the Future of Artificial Intelligence)
- **Kaggle Dataset Contributor** with a dataset having **4000+ views** and featured on the **Official Trending Datasets** across the Globe.
- Secured **second runner-up** position at the Byte Synergy 2.0 ML competition organized by Zense, IIIT Bangalore.
- Attained **first runner-up** position at the Asteroid Venture competition in NSSC, IIT Kharagpur.
- Achieved **first runner-up** at the TechTrove, a Quantitative analysis competition hosted by IIM Trichy.
- **Competitive Programming: Pupil at Codeforces** (Max Rating **1308**)

EXTRA-CURRICULAR ACTIVITIES

- **Open Source** Contributor with **300+ contributions** and **30+** PRs in OS Projects like stdlib, OSGeo etc.
- Web Developer for the website of **Jagriti'24** event, an annual fest organized by the Social Service Council, IIT BHU.
- PR Coordinator, **Technex'23** and Event Executive for **MLWare** in **Technex'24** , Asia's Oldest Technical Fest.

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