Baibhav Bittu Tiwari

 github.com/xxxxxxx | linkedin.com/in/xxxxxxxxxx | baibhavbittutiwaari@gmail.com | +91-9060664929

EDUCATION

Indian Institute of Technology (BHU) Varanasi, India   Nov 2021 - Jun 2026
Bachelors of Architecture   CGPA: 7.91

TECHNICAL SKILLS

Programming languages: Python, JavaScript
DS/ML: SQL, Pytorch, Numpy, Pandas, Matplotlib, SKlearn, Seaborn
Web Scraping/Frameworks: HTML, CSS, Requests, Playwright, Selenium, Beautiful Soup
Area of Interest: Data Science, Machine Learning, Deep Learning, Time Series, Natural Language Processing, Web Scraping

PROJECTS

Time-Series Climate Forecasting   Mar 2024

- Analyzed Delhi's **4-year** time-series temperature data of daily frequency, focusing on stationarity and **seasonality**.
- Used different statistical models and data transforming techniques to reduce the **non-stationarity** from the dataset.
- Applied a **Bidirectional LSTM** model tuned with cyclical features to forecast daily temperature for next **3 months**.
- Used **CUDA Programming**, early stopping, and normalization to achieve an MSE of **2.9** and R^2 score of **0.92**.
- **Exposure:** Time-Series Analysis, Bidirectional LSTM, Neural Networks, Climate Forecasting, Statistical Analysis.

AI-based trending Newsletter | Real-Time Google Trends   July 2024

- Implemented a system to fetch **real-time** Google trending searches from different countries using RSS feeds.
- Applied **NLP**, Cosine Similarity to drop duplicates and topic-wise categorization, used **Jinja2** for email template.
- Integrated **Gemini 1.5 pro** model with few-shot training and **prompt tuning** to generate concise news summaries.
- Designed a pipeline to schedule **automatic emailing** daily summarized news updates to 50+ subscribers using API.
- Saved **25+ hours** using AI and automation and worked on template designing with CSS to enhance user experience.
- **Exposure:** Generative AI, Natural Language Processing, Web Scraping, API Integration, GitHub Actions

Crypto Trading Strategy | Inter IIT Tech Meet 12.0   Dec 2023

- Applied statistical techniques using **15+ technical indicators** (SMA, EMA, RSI, MACD) for signal extraction.
- Developed and fine-tuned a **Random Forest Classification** model to identify breakout and breakdown patterns.
- Backtest **BTC-USDT** data for 4 years and tested with current data to see the strategy's drawdown, Calmer ratio, etc.
- Achieved **82% accuracy,** demonstrating robust model performance, and then tested this for the next 1 year.
- Risk management by **walk forward analysis** and model parameter tuning to optimize trading outcomes.
- **Exposure:** Statistical Modeling, Machine Learning, Technical Indicators, Data Visualization, Figma, Backtesting.

Car Price Prediction | KaggleX Skill Assessment Challenge   Aug 2024

- Developed a model to predict used car prices using **12+ features** like brand, mileage, engine, and transmission.
- Implemented Random Forest, XGBoost, an **ANN with dropout**, and feature imputation for **out-of-box test** cases.
- Handled data irregularities, including up to **8% missing** values in a 54k-row dataset, achieving an **RMSE of 69,881**.
- Ranked **Top 10% among 1,900** global participants by optimizing performance through **feature engineering** techniques.
- Worked on a dataset **generated** by a Deep Learning model with 71k rows of used car price prediction data.
- **Exposure:** Feature engineering, Artificial Neural Network, Machine Learning, Data Visualization

ACHIEVEMENTS

10th in InterIIT Tech Meet	Represented IIT BHU in the Mid-Prep competition of Crypto Trading Challenge.	2024
2nd in Synergy, IIT KGP	Runner-up in esteemed competition in the stock market with participation 400+ teams.	2023

POSITIONS OF RESPONSIBILITY

Co-Head, BASH 6.0 Business Club   2023 - 2024

- Led BASH, an international event organized by the Business Club IIT BHU, with **2500+ participants** from **6+ countries**.
- Organized 10+ competitions and events by **collaborating** with industry leaders and collecting a prize pool of **220k INR**.

Senior Core Team Member, Business Club   2022 - 2024

- Mentored **30+ junior** members and 100+ freshers by **brainstorming sessions** in diverse fields in finance and Data.
- Collaborated with teammates and senior members to organize a finance competition with **1500+ freshers** participating.

Core Team Member, Social Projects' Club   2023 - 2024

- Worked on a project with **10+ members**, solving problems of visually impaired persons by **identifying objects** in real-time.
- The 'SARTHI' project integrates **YOLO v7** object identification model and **text-to-speech API** for real-time audio output.