

JOY BISWAS

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EDUCATION

VIT Bhopal University

Int. MTech in Computation & Data Science

2022 – 2027

Bhopal, India

TECHNICAL SKILLS

- **Languages:** Python, C++, Java, JavaScript, HTML, CSS
- **ML/AI:** PyTorch, TensorFlow, Keras, Scikit-learn, BERT, Pandas, NumPy, NLP
- **Web Development:** Streamlit, React.js, Flask, REST APIs, MongoDB, TailwindCSS
- **Embedded Systems:** Arduino, ESP8266, TP4056, Solar Circuit Design
- **Tools:** Git, GitHub, Plotly, Postman, Google Colab, VS Code

EXPERIENCE

AIML Intern

Elevate Labs

Aug 2025 – Present

Remote

- Participated in designing and optimizing ML models for cognitive training products using Python, TensorFlow, and Scikit-learn.
- Engineered machine learning pipelines to analyze user engagement data, elevating the effectiveness of cognitive training applications.
- Devised automated data preprocessing workflows to cleanse and structure raw data, enhancing the accuracy of training datasets.

PROJECTS

Event-Triggered Privacy Anchors for Federated Learning — Python, PyTorch, Federated Learning, Differential Privacy

- Implemented a novel Federated Learning framework using Event-Triggered Privacy Anchors (ETPA) to enhance data privacy in non-IID settings.
- Utilized Differentially Private VAEs and GANs to generate synthetic data anchors, dynamically adjusting privacy based on client model divergence.
- Designed and evaluated the system to balance the trade-offs between model accuracy, communication efficiency, and rigorous privacy guarantees.

Stock Trend Predictor & Forecast Dashboard — Python, TensorFlow, LSTM, Streamlit, Plotly

- Developed an interactive dashboard using Streamlit to predict stock trends by combining a Bidirectional LSTM model with financial technical indicators (RSI, MACD, Bollinger Bands).
- Engineered a real-time data pipeline using the Yahoo Finance API and implemented dynamic data visualizations with Plotly.
- Enabled user customization of model parameters and provided CSV export functionality for post-analysis.

Resume Analyzer with Leaderboard system — Python, BERT, Flask, React, MongoDB

- Engineered a Resume Analyzer with a dynamic leaderboard using BERT for advanced semantic text comparison.
- Increased candidate-job match accuracy by 35% and reduced manual screening time by 50
- Developed and deployed the full-stack solution with Python, Flask, React.js, and MongoDB.

Solar Powered WIFI — Arduino, ESP8266, IoT, Solar Circuit Design

- Built a stand-alone, solar-powered Wi-Fi solution by integrating renewable energy systems with wireless networking hardware.
- Designed remote monitoring protocols to enable proactive maintenance and ensure optimal system uptime in underserved regions.

EXTRACURRICULAR ACTIVITIES

- **Football:** Captained and represented state, school, and college-level teams, securing multiple championships.
- **Dramatics Club:** Served as a core member, successfully organizing and managing multiple large-scale college events.
- **Vocal Music:** Actively participated in and performed at various vocal events and competitions throughout school and college.

CERTIFICATIONS

- **Hewlett Packard Enterprise Software Engineering Job Simulation**, Forage (2025)
- **Machine Learning Specialization**, Coursera (2025)
- **Google Data Analytics Professional Certificate**, Coursera (2025)
- **Machine Learning with Python**, Coursera (2024)
- **IBM AI Engineering**, Coursera (2024)