

Biswajit Pradhan

B.Tech CSE Student | Machine Learning | Open to Internships

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PROFESSIONAL SUMMARY

Results-driven B.Tech Computer Science student (3rd Year) with a strong foundation in mathematics, machine learning algorithms, and end-to-end ML project development. Experienced in building, deploying, and containerizing ML solutions using Python, Scikit-learn, TensorFlow, and Docker. Passionate about solving real-world problems through data-driven approaches, with a growing focus on deep learning and MLOps practices.

EDUCATION

B.Tech in Computer Science & Engineering 2023 – 2027
Government College of Engineering, Keonjhar, Odisha | CGPA: 8.45 / 10

Class XII (CBSE) 2022
Jawahar Navodaya Vidyalaya, Jharsuguda | Percentage: 90.8%

Class X (CBSE) 2020
Jawahar Navodaya Vidyalaya, Jharsuguda | Percentage: 92.8%

EXPERIENCE

Founder & Developer - bputnotes.in | 2025 – Present *Ed-Tech Platform · Web Development · AI Automation*

- Founded and independently built BPUTNotes.in, an educational platform serving BPUT university students with study materials and notes.
- Automated generation of 2,000+ structured notes leveraging the OpenAI API, significantly reducing manual content creation effort.
- Solely responsible for end-to-end platform design, development, and maintenance including UI/UX, hosting, and performance optimization.
- Grew the platform organically through student communities, demonstrating product thinking and user-focused development.

TECHNICAL SKILLS

Languages	Python, Java, JavaScript, SQL
ML / DL	Scikit-learn, TensorFlow, Keras, XGBoost, LightGBM
Math & Stats	Probability, Statistics, Linear Algebra, Calculus, Optimization
Data & EDA	Pandas, NumPy, Matplotlib, Seaborn, Plotly
MLOps / Deploy	Docker, Flask, FastAPI, Streamlit, Git, GitHub Actions
Databases	MySQL, SQLite, Basic MongoDB
Tools / IDE	Jupyter Notebook, VS Code, Google Colab, PyCharm

PROJECTS

Customer Churn Prediction System | ML Pipeline + API Deployment

[Repo Link](#)

Python · XGBoost · FastAPI · Streamlit · Docker · Optuna · SHAP · HuggingFace

- Built an end-to-end customer churn prediction pipeline using the IBM Telco dataset (7,043 customers, 21 features) achieving ~0.85 AUC-ROC using XGBoost.
- Performed extensive EDA and feature preprocessing, fixing data inconsistencies (e.g., TotalCharges type issue), applying StandardScaler, OneHotEncoding, and SMOTE to address class imbalance.
- Optimized model performance using Optuna hyperparameter tuning with cross-validation, comparing Logistic Regression, Random Forest, LightGBM, and XGBoost.
- Implemented model explainability using SHAP, generating global feature importance and individual prediction explanations for business insights.
- Developed a FastAPI backend exposing REST endpoints (/predict, /predict/batch) with Pydantic validation for real-time inference.
- Built an interactive Streamlit dashboard for single and batch predictions, enabling non-technical stakeholders to analyze churn risk.
- Containerized the application using Docker and deployed API + dashboard on HuggingFace Spaces.

Image Classification – Multi-class CNN

Python · TensorFlow · Keras · OpenCV · Transfer Learning · Streamlit

- Designed a multi-class image classification system on a custom dataset of 10,000+ images across 8 categories using a fine-tuned VGG16 backbone, achieving 93.2% test accuracy.
- Applied data augmentation (rotation, zoom, flipping) to tackle overfitting; reduced validation loss by 18% compared to training from scratch.
- Implemented Grad-CAM visualizations to interpret model predictions and built a drag-and-drop Streamlit web app for real-time inference.
- Optimized inference speed by 35% using TensorFlow Lite model quantization for edge deployment scenarios.

RELEVANT COURSEWORK & SELF-LEARNING

- Machine Learning · Deep Learning · Data Structures & Algorithms · Database Management Systems · Computer Vision · Natural Language Processing · Statistics for Data Science · Linear Algebra & Optimization · Operating Systems · Prepared for GATE Data Science & Artificial Intelligence (Completed the Syllabus with fundamental understanding of Machine learning algorithms).

CERTIFICATIONS & COURSES

- Machine Learning Specialization – Andrew Ng (Coursera / DeepLearning.AI)
- Deep Learning Specialization – DeepLearning.AI (Coursera)
- Python for Data Analysis freecodecamp

ACHIEVEMENTS & ACTIVITIES

- Ranked in top 5% in college-level Hackathon – Built a fraud detection model in 24 hours (2024).
- Active participant in Leetcode and Geeks for Geeks problem solving.
- Active participant in Kaggle Competition.
- Member of the college AI/ML Club; conducted a workshop on 'Docker for ML Engineers' for 60+ students.

Portfolio: biswajitpradhan.in • All projects available on [GitHub](#) • Open to immediate internship opportunities