Arman Bishnoi

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• My Site

EDUCATION

Thapar Institute of Engineering And Technology

September 2021 - June 2025

Bachelor of Engineering in Computer Science (AI)

Patiala, Punjab

Projects

E-Commerce Product Intelligence System — Python, PyTorch, scikit-learn

Code

- Developed an end-to-end machine learning pipeline for e-commerce product analysis that processes multi-modal data (images, text, numerical features) to generate insights and predictions with 85% accuracy.
- Implemented computer vision techniques using ResNet50 for automated product image feature extraction, reducing manual tagging efforts by 70% and improving product categorization precision.
- Built a sales forecasting and product ranking system using ensemble models that achieved 12% lower MAE than baseline and demonstrated superior performance with NDCG@10 and AUC metrics for recommendation relevance.

Customer Churn Prediction — Python, scikit-learn

Code

- A classification model was built using Python (scikit-learn) on a 1,000-row telecom dataset, with 78% accuracy achieved (a 15% improvement over baseline) by handling missing data (10% imputed) and encoding 5 categorical features.
- Hyperparameters were optimized using GridSearchCV with 3-fold cross-validation, resulting in a 25% reduction in false negatives and an improvement in recall to 72%.
- Feature importance was visualized using SHAP values, and the results were exported as interactive HTML reports using Plotly.

Interactive Sales Dashboard for Retail Analytics — Power BI

Code

- An interactive dashboard analyzing retail sales trends, inventory, and profitability metrics was developed.
- Power BI was connected to a SQL database to enable real-time updates and visualization of over 10 thousand+ data points.
- Actionable insights were provided, leading to a 25% improvement in inventory turnover rates and increased accuracy in sales forecasting.

Experience

ThapaSat (ELC)

Thapar Patiala, Punjab

Summer Intern

June 2023 - July 2023

- Over 50 hours of satellite audio data were collected, capturing various frequencies used in weather transmissions.
- A signal processing algorithm was developed to convert over 100 audio files into images, achieving a 95% success rate in producing clear weather maps.
- Backend Python code was created for detecting cyclones from satellite images, processing 60 images per minute with 90% accuracy in predicting cyclonic paths up to 36 hours in advance.

SKILLS

Programming Languages: Python, C++, SQL, HTML, CSS

Libraries and Tools: Scikit-learn, Pandas, NumPy, PyTorch, Power BI, AWS (S3, EC2), MongoDB

Concepts: OOPs, Machine Learning, Computer Vision, Data Analysis, ETL Pipelines, Basic Cloud Deployment

Problem-Solving: Debugging, Optimizing Performance, Algorithm Design

Soft Skills: Collaboration, Communication, Analytical Thinking

Certifications

AWS Academy Cloud Foundations

June 2024

AWS Academy Graduate

View Certificate

Create ML Models with BigQuery ML

2024

Google Cloud Skill Badge

View Certificate

Prompt Design in Vertex AI

2024

Google Cloud Skill Badge

View Certificate