

ABHISHEK SINGH RAJAWAT

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PROFESSIONAL SUMMARY

Third-year B.Tech student (Electrical Engineering) with strong foundations in **Machine Learning**, **Deep Learning**, and **Data Science**. Built a **live electricity demand forecasting system** for Madhya Pradesh — a scheduled data pipeline with PostgreSQL and a public, continuously self-grading dashboard — alongside 5+ end-to-end ML projects spanning CNNs, NLP, and API automation. Completed Andrew Ng's Supervised ML course with **99.43%** grade and 14 professional certifications. Proficient in Python, TensorFlow, Scikit-learn, and SQL. Seeking to deepen ML expertise through **Amazon ML Summer School 2026**.

EDUCATION

Jabalpur Engineering College (JEC)

B.Tech — Electrical Engineering

Jabalpur, Madhya Pradesh

2024 – 2028 (Expected)

Relevant Coursework: Machine Learning · Deep Learning · Probability & Statistics · Linear Algebra · Data Structures & Algorithms · Python Programming · DBMS · Numerical Methods · Signal Processing

TECHNICAL SKILLS

Languages	Python, C++, SQL
ML / DL	Supervised Learning, Gradient Boosting, Time-Series Forecasting, CNNs, Text & Image Classification, LLM Integration
Frameworks	TensorFlow, Keras, Scikit-learn, LightGBM, NumPy, Pandas, Matplotlib, Seaborn, NLTK
Data / MLOps	Streamlit, GitHub Actions (CI/CD + scheduled pipelines), EDA, Feature Engineering, TF-IDF, OAuth 2.0, Google APIs
Databases	PostgreSQL, SQL (Joins, Aggregations, Subqueries, Window Functions) — Oracle Certified (99%)
Tools	Google Colab, Git, GitHub, Jupyter Notebook, Kaggle, VS Code
Core CS	Data Structures & Algorithms, Object-Oriented Programming, Problem Solving

PROJECTS

Live Electricity Demand Forecaster — Madhya Pradesh

[GitHub](#) ↗ | [Live Dashboard](#) ↗

Python · LightGBM · PostgreSQL · GitHub Actions · Streamlit · Grid-India & Open-Meteo APIs

- Built an **unattended daily pipeline** that scrapes Grid-India's Power Supply Position reports, joins **7.5 years** of demand history with city-level weather in **PostgreSQL**, and forecasts the state's daily peak demand (MW) on a scheduled **GitHub Actions** cron
- 3.56% MAPE over 203 chronologically held-out days** — **46% error reduction vs. a same-weekday naive baseline** — using lag, rolling-mean, holiday-calendar, and cooling-degree-day features
- Logs every forecast **before the outcome is known** and grades it publicly against actuals with **rolling 30-day MAPE** on the live dashboard — a continuously self-auditing model
- Survived a mid-project data-source retirement by **reverse-engineering the replacement portal's undocumented API** — layout-robust parsing, **50 pytest tests**

Smart Review Analyzer — Amazon Rating Prediction

[GitHub](#) ↗

Python · Scikit-learn · NLTK · TF-IDF · Pandas · Matplotlib · Seaborn · WordCloud

- Built an end-to-end **multi-class NLP pipeline** predicting 5-star ratings from **568K+ Amazon product reviews** using TF-IDF vectorization (bigrams), tokenization, stemming, and stopword removal
- Trained and compared **4 classifiers** (Logistic Regression, SVM, Random Forest, Naive Bayes) with **class-weight balancing** for heavy imbalance, achieving **~67% accuracy / 0.65+ Weighted F1** on a 5-class task

Fashion MNIST Image Classification (CNN)

[GitHub](#) ↗

Python · TensorFlow · Keras · NumPy · Google Colab

- Designed a **Convolutional Neural Network** for 10-class image classification on **70,000 images** using Conv2D, MaxPooling, Dropout, and BatchNorm layers
- Applied **data augmentation and L2 regularization** to reduce overfitting, achieving **91%+ test accuracy** on unseen data

Email Spam Detection System

[GitHub](#) ↗

Python · Scikit-learn · NLTK · Pandas · Google Colab

- Engineered an NLP-based spam classifier processing **5,500+ emails** with tokenization, stopword removal, stemming, and **TF-IDF vectorization**
- Trained and compared Naive Bayes, Logistic Regression, and SVM models — achieved **95%+ accuracy** with precision-recall optimization

Fully Automated YouTube Analytical System

[Demo](#) ↗

Python · Google APIs (YouTube, Slides, Gmail) · OAuth 2.0 · TF-IDF

- Engineered an end-to-end automation pipeline using **OAuth 2.0 and 3 Google APIs** to fetch video data, perform **TF-IDF keyword extraction** for trend identification, auto-generate Slides reports, and email metrics — **zero manual intervention**

AWARDS & HACKATHONS

- CodeHunt Hackathon (Inertia 2.0)** — Competed in a 12-hour intensive competitive programming hackathon at Jabalpur Engineering College (JEC)
- Smart India Hackathon (SIH)** — Selected to represent team in college-level selection rounds for India's premier national hackathon

CERTIFICATIONS

Coursera — Stanford / DeepLearning.AI

- Supervised Machine Learning: Regression & Classification** by Prof. Andrew Ng — **99.43%** | 33 hrs — [Verify](#) ↗

DataCamp — Data Science Track (12 Courses)

- Programming:** Intro to Python · Intermediate Python | **Analysis:** pandas · Joining Data · EDA | **Stats:** Statistics · Hypothesis Testing · Sampling | **Visualization & AI:** Seaborn · Git · AI for Work · Claude Code 101

Oracle Corporation

- Databases for Developers: Foundations** — Certificate of Excellence (Oracle Dev Gym) — **99%**

CODING PROFILES & ADDITIONAL INFORMATION

GitHub: [BenjaminTennyson27](#) (27 repos) **Kaggle:** [benjamin10nyson](#) (ML Practitioner) **LeetCode:** Active — DSA Practice

Languages: English, Hindi | **Interests:** ML, AI, Power-Systems Forecasting, CV, NLP, Automation | **Exploring:** LLMs, RecSys, AWS