



ABHISHEK GURJAR — 20AE30053

AEROSPACE ENGINEERING (M.Tech Dual 5Y)

MICRO SPL. in ARTIFICIAL INTELLIGENCE AND APPLICATIONS

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EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2025	Dual Degree 5Y	IIT Kharagpur	7.51 / 10
2019	Senior Secondary Examination (BSER)	Navoday Bal Sr Sec School, Kaithoon (Kota)	78.40%
2017	Secondary Examination (BSER)	Navoday Bal Sr Sec School, Kaithoon (Kota)	92.67%

INTERSHIPS

Data Science Intern — Think Turbo — Bengaluru

May 2024 - Jul 2024

Objective: Developed a property recommendation system using content-based filtering and hybrid methods

- Developed recommendation system using **TfidfVectorizer & cosine similarity**, which boosted user engagement with personalized suggestions
- Engineered features** such as location, price, and interactions to improve accuracy by integrating hybrid methods for targeted recommendations
- Visualized property data using **Seaborn** and **Folium**, creating interactive maps as well as scatter plots to showcase property trends and insights

COMPETITION/CONFERENCE

American Express Campus Challenge 2024 — Predict The Winner of The T20 Cricket Match

May 2024 - Jul 2024

Objective: Developed a machine learning pipeline using gradient-boosting algorithms to predict T20 cricket match outcomes

- Engineered and optimized features** from match, batsman, and bowler datasets, significantly enhancing the model's predictive performance
- Created over **30 features**, and performed **hyperparameter tuning**, regularization, feature selection, and **normalization** of the data
- Utilized the **CatBoost model** in ensemble mode, achieving **72% accuracy** and successfully ranked among the **top 20** teams out of 423 teams

Data Analytics — General Championship— IIT Kharagpur — Gold Winner

Feb 2023 - Mar 2023

Objective: Develop a predictive model to classify quality of manufactured units using periodic sensor data from a manufacturing process

- Analysed **periodic sensor data** from an advanced automated manufacturing unit to accurately predict the quality of manufactured products
- Conducted an ablation study to compare the relative importance of different sensors in accurately predicting the final state of the products
- Successfully **ensembled** best-performing **time series**, **DL**, and **AutoML** models - **LSTM**, **1D CNN**, and **AutoGluon**, achieving **94% accuracy**

PROJECTS

Multiple PDF ChatBot — Generative AI, LangChain — Self Project

Jun 2024 - Oct 2024

Objective: Developed a PDF chatbot using RAG, FAISS, and GPT-4 for efficient query responses and extended interactions through LangChain

- Implemented a **retriever and generator** model architecture to efficiently encode, retrieve, and precisely respond to queries from uploaded data
- Utilized Facebook AI Similarity Search (**FAISS**) for efficient semantic search and **GPT-4** as a reliable natural language response generator
- Integrated the **LangChain** Framework, leveraging **ConversationalSummaryMemory** for prolonged conversation & enhanced user interactions

Multilingual Health Query Retrieval System — Self Project

May 2023 - Jul 2023

Objective: Developed a multilingual health query retrieval system using BERT and a custom dataset for precise health information retrieval

- Developed a custom dataset by scraping the **1mg** website using **Selenium**, capturing patient FAQs and corresponding doctor prescriptions
- Successfully Classified drugs into five disease categories using **K-means clustering**, improving dataset structure and classification accuracy
- Implemented **BERT** for optimal information retrieval performance by building a **web app** for efficient query ranking and prescription retrieval

SKILLS AND EXPERTISE

Language/Tools: Python | C++ | SQL | VS Code | XCode | Git | GitHub | Jupyter Notebook | Google Colab | MS Office | OpenSearch

Frameworks/Libraries: C++ STL | NumPy | Pandas | Scikit-learn | TensorFlow | Keras | Streamlit | LangChain | Seaborn | Matplotlib

CERTIFICATIONS

Amazon ML Summer School

Sep 2023 - Oct 2023

- Completed a **4-week course**, mastering **8 modules**, including **Supervised Learning**, **Deep Neural Networks**, & **Dimensionality Reduction**
- Acquired practical skills in **Unsupervised Learning**, **Probabilistic Graphical Models**, **Sequential Learning**, and **Reinforcement Learning**

AZ-201: Applied Algorithms and Data Structures — AlgoZenith

Apr 2023 - Sep 2023

- Completed a **16-week** training in Data Structures & Algorithms, Probability & Statistics, **Object-Oriented Programming**, **Operating Systems**
- Solved **300+** problems, achieving **80%** proficiency while actively participated in internal contests, showcasing continuous improvement

COURSEWORK INFORMATION

- Algorithms
- Machine Learning Foundations and Applications
- Linear Algebra and Complex Analysis
- Programming & Data Structures
- Advanced Learning Paradigms for Artificial Intelligence
- Probability & Statistics
- Advanced Calculus
- Artificial Intelligence for Cyber Physical Systems
- Deep Learning

POSITIONS OF RESPONSIBILITY

Captain — Illumination — Radhakrishnan Hall of Residence

Jul 2023 - Nov 2023

- Led and managed a **300-student** team for **45 days**, demonstrating composure, adaptability, and decision-making in high-pressure situations
- Coordinated cross-functional collaborations with the Theme, Design, Garden, Oil, and Presentation teams, enhancing operational efficiency
- Successfully secured the prestigious **Bronze** medal through strategic planning and thorough execution during the intense competition

EXTRA CURRICULAR ACTIVITIES

- Participated in various hackathons and coding contests on platforms such as Unstop, Codeforces, LeetCode, GFG, and Codechef
- Served as a Core Team Member of the Rajasthan Cultural Association, IIT Kharagpur, successfully coordinated key cultural events
- Member of the Gold-Winning Volleyball Team in the Inter Hall Gymkhana Championship 2022, representing RK Hall at IIT Kharagpur