# **Uttam Mahata**

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### **EDUCATION**

Indian Institute of Engineering Science and Technology, Shibpur - Howrah, India | 2022 - 2026

Bachelor of Technology in Computer Science and Technology

CGPA: 9.07 (Till 4th Semester)

**Relevant Coursework:** Data Structures; Design and Analysis of Algorithms; Computer Architecture and Organization; Introduction to Data Science; Programming Paradigms; Microprocessor Based Systems; Database Management Systems; Soft Computing; Graph Algorithms

## **SKILLS**

Programming Languages: C/C++, Java, Python

Technical Skills: Data Structures and Algorithms, Database Management Systems, Object Oriented Programming

Web Development: HTML, CSS, JavaScript, TypeScript, Angular, Spring Boot, Bootstrap(Framework), PrimeNG, Flask

Data Science and Machine Learning: Numpy, Pandas, Scikit-learn, Jupyter Notebook, Matplotlib, Seaborn, Classification, Natural Language Processing

Others: Linux, Git, AWS, Github, Bitbucket, Docker

## **PROJECTS**

## Course Wagon | October 2024 - Present

#### Frontend | Full Stack Demo

A web application for automated course management, utilizing the Gemini API for Al-driven content generation.

- Automated Al-based course creation, streamlining the course development process for educational platforms.
- Efficient MySQL database management for storing and retrieving course content and user data.
- Smooth and responsive UI components for improved user experience and engagement.
- Integrated Gemini API for dynamic content generation, ensuring up-to-date and relevant course material

Technology Stack: Angular, HTML, CSS, TypeScript, Python, Flask, Google Generative AI, Bootstrap(Framework), MySQL, REST APIs, Firebase

## Winners Education | June 2023 - Present

A scalable web application for a coaching institute, enhancing both UI/UX and backend performance.

- Designed a <u>Comprehensive Scoreboard Management System</u> for tracking offline exam scores.
- Smooth and responsive UI components for better user engagement and overall interface quality.
- Integrated REST APIs with frontend components to facilitate dynamic content updates and real-time functionality.
- Developed features for the admin interface, enabling download options for question papers as PDFs.

Technology Stack: Angular, HTML, CSS, TypeScript, Spring Boot, Bootstrap(Framework), PrimeNG, MySQL, REST APIs, Docker, Bitbucket

# **Loan Approval Prediction** | October 2024

A machine learning model designed to predict loan status using RandomForest, XGBoost, and LightGBM with Stratified K-Fold and ROC-AUC metrics.

- Conducted data preprocessing and cross-validation for model evaluation and fine-tuning.
- Achieved high ROC-AUC for predictive accuracy, ensuring reliable loan status predictions.
- Visualized model performance using ROC curves to assess classification quality and accuracy.

Technology Stack: Python, Jupyter Notebook, Numpy, Pandas, Scikit-learn

# **Course Recommendation System | September 2024**

A recommendation model for suggesting similar Coursera courses based on user input, utilizing NLP techniques like CountVectorizer and TF-IDF, paired with cosine similarity.

- Utilized NLP techniques such as CountVectorizer and TF-IDF for content description analysis.
- Applied cosine similarity to measure course relevance and suggest the most fitting options.
- Enhanced the system's recommendation accuracy and personalized user experience based on course content.

Technology Stack: Python, Pandas, Scikit-learn, TF-IDF, Cosine Similarity

# **CERTIFICATIONS**

- Introducing Generative AI with AWS Udacity | October 2024
- HTML Essential Training LinkedIn Learning | July 2023