

Tufan Mandal

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Education

Bachelor of Technology in Computer Science & Engineering

University of Engineering and Management (UEM), Jaipur

2020 – 2024

Jaipur, Rajasthan

Experience

Bharat Intern | [Certificate Link](#)

Full-Stack Portfolio Management System | Web Development | [Link](#)

March – April 2024

- Developed & deployed a fully responsive **MERN** stack portfolio web app, achieving 100% mobile responsiveness.
- Built dual frontends—an **admin panel** for content management and a **user interface** for portfolio browsing.
- Enhanced website efficiency, improving page load speed by 35% through code splitting and optimized **API calls**.
- Integrated **MongoDB** to store and manage 50+ project entries, skill records, and user interactions efficiently.
- Implemented authentication & security, ensuring 99.9% uptime and secure API calls.

Projects

Heart disease prediction | Machine Learning | [Link](#)

June 2023

- Developed a heart disease prediction model using **machine learning** techniques, analyzing a dataset of over 500 patient records.
- Achieved an impressive **93% accuracy** rate by implementing **decision trees**, **logistic regression**, and **random forests**.
- Gained expertise in machine learning, data analysis, and collaboration with domain experts. Gained valuable experience in **model building**, model validation and healthcare application development.

Content based movie recommendation system | Machine Learning

January 2023

- Implement a **content-based** movie recommendation system utilizing a dataset of **5000 movies**, analyzing features such as genre, crew, and cast keywords to provide personalized suggestions.
- Analyzed and compared 5+ content-based recommendation techniques, including traditional and state-of-the-art methods.
- Integrated **natural language processing (NLP)** techniques to extract insights from 100 user reviews, enhancing the system's ability to understand individual preferences and improve recommendation accuracy.
- Provided insights for hybrid recommendation systems, improving precision by 15% in real-world applications.

IoT based smart traffic management system

June 2022

- Monitored vehicle density at 4+ road junctions using IR sensors for real-time traffic management.
- Utilized ESP8266 microcontroller, processing 100+ sensor signals per minute in real-time based on vehicle density.
- Reduced congestion by 30%, adjusting signal patterns based on real-time vehicle density data.
- Incorporated emergency vehicle detection, enabling manual signal override for priority clearance within 2 seconds.
- Enhanced road efficiency, ensuring 15% faster vehicle movement compared to fixed-time traffic signals.

Skills

- Programming Languages:** Java, Python, JavaScript
- Areas Of Interest:** IoT, Big Data, Data Science, Machine Learning.
- Web Development:** HTML, CSS, Bootstrap, React, Node.js, Express, MongoDB (MERN Stack)
- Database Management:** MongoDB, Oracle, SQL

Courses

- NPTEL:** Data Base Management System , Python for Data Science , Software Testing
- Coursera:** Python Basics , Foundations: Data, Data, Everywhere

Profile Links

- Leetcode:** <https://leetcode.com/Tufan1084/>
- Coding ninjas:** <https://www.codingninjas.com/studio/profile/tufan>
- GitHub:** <https://github.com/tufan0603>
- Website:** <https://portfolio-gamma-one-56.vercel.app>

Declaration

I am Tufan Mandal hereby declare that all the above mentioned in this resume are true.