

Mugdha Chavan

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EDUCATION

- **Bachelor of Technology in Computer Science and Engineering (AI/ML)** 2023 - 2026
KIT's College of Engineering, Kolhapur (Autonomous) CGPA: 8.86
- **Diploma in Computer Engineering** 2020 - 2023
Dr. D. Y. Patil Polytechnic, Kolhapur Percentage: 87.09
- **Secondary School Certificate (SSC)** 2020
Maharashtra High School and Junior High School, Kolhapur Percentage: 92.20

EXPERIENCE

- **Qualitas Techno Solutions** 2022
Intern Kolhapur
 - Authored a technical report on 51+ emerging IoT technologies, influencing the company's choice of two new prototyping platforms.
 - Improved prototype functionality by 20% through resolving hardware-software integration issues

PROJECTS

- **Smart City Solutions: Automatic Garbage Tracking System**
An IoT-based automated system
 - Built end-to-end IoT system using Arduino and GPS to reduce operational costs and fuel consumption through route optimization.
- **Surveillance: Real-Time Insight System**
Object detection project
 - Cut manual monitoring needs by 60% by developing a Python surveillance system with real-time SMS alerts and activity logs.
 - Achieved a 95% accuracy rate in person detection and tracking by optimizing a high-fidelity, real-time algorithm.
- **Real-Time Signal Adaption for Multi-Directional Heavy Traffic**
An object detection project
 - Designed a highly scalable system prepared for citywide deployment and integration with existing smart city infrastructure.
- **Textify**
React.js, JavaScript (ES6)
 - Developed Textify, a responsive web application using React.js for real-time text analysis and transformation.
 - Implemented client-side features including text formatting, word and character counting, and dynamic UI updates.
 - Applied component-based architecture, state management, and Bootstrap to ensure performance and responsiveness.
- **JanPath – Winning Elections with Precision Analytics**
Data Engineering, Analytics, Backend and API
 - Developed JanPath, a precision analytics-based Election Management System with real-time data pipelines, predictive insights, and AI-powered automation. Provided scalable full-stack solution that is data-driven and performance-optimized.
 - Role-based dashboards and an intelligent chatbot to assist campaign decision-making.

SKILLS

- **Programming Languages** - C, C++, Java, Python
- **AI/ML and Data Science** - YOLOv8, CNN ,TensorFlow, OpenCV, Pandas, NumPy, Matplotlib, Scikit-learn
- **Web Development and Databases** - HTML, CSS, JavaScript, Node.js, React, Flask, PostgreSQL, MySql, MongoDB
- **IoT/Embedded** - Arduino, Hardware-software integration
- **Generative AI** - Transformers, Prompt Engineering, Fine-tuning , GANs, Synthetic Data Generation
- **Other Tools-** Tableau, PowerBI

ACHIEVEMENTS AND AWARDS

- **Finalist** - SHODH-2022 at JSPM, Pune | National Level Project Competition 2022
- **Winner** - Project Based Learning Competition 2024
- **Runner-up** - Project presentation competition. 2024

CERTIFICATIONS

- **Google (AI/ML)** - Completed a Google-certified course covering the principles of machine learning, model construction, assessment, and real-world AI applications.
- **MotionCut (Java Frontend)** - Demonstrated practical experience in Java-based frontend development and UI implementation.
- **1Stop (Java Full Stack)** - Demonstrated hands-on skills in building full-stack applications using Java with integrated frontend, backend, and databases.

PUBLICATIONS

- **2024 IEEE International Conference** - DOI: 10.1109/DISCOVER62353.2024.10750569 2024
- **2025 IEEE International Conference** - DOI: 10.1109/ASIANCON66527.2025.11281274 2025
- **ICRIC 2024, Volume 1 (Springer)** - DOI: https://doi.org/10.1007/978-981-96-5969-2_1 2025