

Madhumitha R

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Career Objective

Machine Learning Engineer and Full-Stack Developer with **1+ years** of experience specializing in Python, Web Development, and the end-to-end ML lifecycle—from data preprocessing to model training—with a focus on data analysis and clean user interfaces.

Education

The American College <i>Master of Computer Applications (CG PA: 8.0 / 10)</i>	Sept 2022 - Apr 2024 <i>Madurai, Tamil Nadu</i>
Lady Doak College <i>Bachelor of Science in Computer Science (CG PA: 8.3 / 10)</i>	Jun 2019 - Apr 2022 <i>Madurai, Tamil Nadu</i>

Experiences

Tamil Nadu e-Governance Agency, Full-time <i>Junior ML Engineer - NLP</i>	Apr 2025 – Present <i>Chennai, Tamil Nadu</i>
<ul style="list-style-type: none">Acquired practical experience in Flask, designing and implementing RESTful APIs with MySQL integration, including a specialized API for dynamic, query-based team list generation.Enhanced the user interface (UI) for agricultural detection models (crop and pest), significantly improving responsiveness and incorporating a user-centric drag-and-drop mechanism for efficient image data uploads.Generated high-quality ground truth data by annotating over 1,000 images of diverse crops (banana, coconut, red gram, turmeric) using data annotating tools such as Label Studio and CVAT.Conducted comprehensive data wrangling and preprocessing on the crop dataset, performing critical data cleaning tasks such as the removal of duplicate records and the filtering of low-quality images (e.g., blurry and pure black images) to ensure high data integrity.Contributed to the technical documentation of an Open Data Platform by architecting UML diagrams to model system requirements and software architecture.Developing a full-stack task management application featuring progress dashboards to monitor and optimize team productivity.Engineering a binary crop/non-crop classification solution that automatically sorted images into designated folders. Established an initial 78% accuracy using a Random Forest Classifier with traditional machine learning approach, then significantly boosted performance to 96% by deploying a CNN built with the PyTorch deep learning framework.	

Zidio Development, Internship <i>Fullstack Developer</i>	Jan 2025 – Apr 2025 <i>Bengaluru, Karnataka</i>
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- Developed a task management application for Zidio using MERN stack technologies with CRUD functionalities and user authentication.
- Designed a responsive UI with React, Tailwind CSS, and Material-UI, building a RESTful API with Express.js and MongoDB, ensuring efficient data storage and seamless task management.
- Implemented login and registration modules in the system to access the user dashboard for adding, editing, deleting, and completing the tasks featuring a form of task title, description, priority, and due date.

Achievement

Recipient of “Certificate of Recognition” by Lady Doak College - Apr 2022 | [LINK](#)

Skills and Interests

Programming Languages and Databases: HTML, CSS, JavaScript, Python, PHP, C#, MySQL, MongoDB

Tools and Platforms: Microsoft VS Code, Spyder, Jupyter Notebook, Git and GitHub, Postman API, Figma, Canva, Wix, WordPress, Miro, Framer, Databricks, Power BI

Libraries and Frameworks: Bootstrap, ReactJS, NodeJS, Tailwind CSS, jQuery, Material UI, Numpy, Pandas, Tkinter, RESTful API, Flask, Pytorch, PySpark

Soft Skills: Adaptability, Teamwork, Leadership, Time Management, Problem Solving

Interests: Calligraphy, Painting, Mandala Drawing, UI/UX Designing, DIY

Certifications

- “Academy Accreditation - Databricks Fundamentals” from Databricks. (Nov 2025) | [LINK](#)
- “NLP - Natural Language Processing with Python” from Udemy. (Sep 2025) | [LINK](#)
- “Data Visualization using Python” from Great Learning. (Mar 2025) | [LINK](#)
- “Python programming” from GUVI Geek Networks, IITM Research Park. (Nov 2023) | [LINK](#)
- “Web Development” Training from Internshala Trainings. (Jun 2023 - Aug 2023) | [LINK](#)

Projects

PYTHON PROJECTS:

SmartBank - Modular Banking Backend System | [Repository Link](#) Oct 2025 - Dec 2025

- Built a feature-rich banking web application using Flask and MySQL that supports customer registration, login, profile management, password reset, admin management, and basic money transfer simulation between accounts.

Language Translator using Tkinter and Deep Translator | [Repository Link](#) Jun 2025

- Developed a simple Language Translator application built using Python's Tkinter library for the graphical user interface (GUI) and the deep translator library for translation functionality that allows users to input text and select a target language for translation.

Myntra Sales Analysis | [Repository Link](#) Mar 2025

- Analysed the Myntra sales dataset and visualized the data in different kinds of charts using Matplotlib and Seaborn libraries by generating the data from the dataset with the help of Numpy and Pandas.

WEB DEVELOPMENT PROJECTS:

Blood Hive - Blood Bank Management System | [Repository Link](#) Mar 2025 - Apr 2025

- Developed a blood bank management system using MERN stack technologies in which the donor can register for the blood donation that helps the admin to fetch and view the donor's details from the MongoDB database.

Fit House - Gym Website | [Repository Link](#) Jun 2025

- Designed Gym website displays the services, trainers, and packages to the users who can register their session according to their convenience, and the admin to view the number of users registered, edit, and delete their details.

Fresher's Target - Placement Management System | [Repository Link](#) Dec 2023 - Mar 2024

- The platform is designed for freshers to apply for jobs through off-campus placements, featuring separate login portals for users and admin, along with user account management and admin tools for monitoring registrations and managing company listings.

Life Frontier Engagement - Website Creation For Women Empowerment | [Repository Link](#) Dec 2021 - Apr 2022

- It is a community-based group project in which a website was created for a women's trust to collect their donations, showcase services, and manage volunteer registrations that made me lead a group of 4 people throughout the entire development of this project.

UI/UX PROJECTS:

Smartify Me - Learning Application | [Behance Link](#) Oct 2024

- A learning application UI was created where the user can register and login to explore different courses under different categories for developing new skills.