

# Milav Dabgar

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AICTE Faculty ID: 1-3241967546



Lecturer & AI/Data Science Practitioner

## Summary

Engineering educator and R&D professional with 9+ years of experience spanning electronics hardware development, embedded systems, AI/ML, and full-stack software engineering. Currently pursuing BS in Data Science and Applications from IIT Madras (Diploma in Programming completed, one project away from Diploma in Data Science). Passionate about bridging theory and practice through innovative teaching, student mentorship, and real-world system development. Proven track record in leading technical initiatives, infrastructure management, and fostering innovation in academic environments.

## Experience

November 2016–Present **Lecturer (Class - II)**, *Government Polytechnic*, Palanpur Area, India, Education Department - Government of Gujarat

- Conducted Lab and Lecture Sessions for courses including Programming in C, Microprocessor and Assembly Language Programming, Microcontroller, Embedded Systems, Circuit Design and Tools, Consumer Electronics, Entrepreneurship and Industrial Management.
- Served as IT Convener, SSIP Co-Convener, Training & Placement Member, and part of MIS and UDAYAM initiative teams.
- Mentored student project teams working in IoT, drones, and embedded automation resulting in two student patents.
- Led student teams that secured over Rs. 25 lakhs funding from Shark Tank India and Rs. 20 lakhs through government innovation support.
- Initiated and currently leading development of Next.js-based smart academic portal with features including smart attendance tracking, assessment workflows, committee management, automated result processing, and real-time analytics.
- Managed self-hosted Linux server infrastructure with Dockerized services, CI/CD pipelines, and backup systems.
- Guided students for innovative projects and acted as an academic adviser.

July 2015–October 2016 **Electronics and Communication Engineer (R&D)**, *TEXEG India Private Limited*, Gandhinagar, Japan-based firm

- Managed end-to-end electronics development for commercial embedded products.
- Performed circuit simulation, PCB design, firmware development, and control systems implementation.
- Designed and tuned controllers (PID, PI, Fuzzy logic controller) using 'Control System Toolbox-MATLAB' and other related tools.
- Designed, developed, coded, tested and debugged system firmware and hardware.
- Provided complete embedded solutions for R&D Projects and product development.
- Supported the R&D Team (Mechanical) for ongoing R&D Operations.

August 2014–July 2015 **Project Intern**, *eiTRA - eInfochips Training & Research Academy Ltd*, Ahmedabad Area, India

## Education

- 2022–Present **BS in Data Science and Applications**, *Indian Institute of Technology Madras*, Online
- Diploma in Programming (Completed)
  - Diploma in Data Science (One project away from completion)
  - Completed over 100 online courses in AI/ML and Data Science
- 2013–2015 **Master's Degree, Communication Systems Engineering**, *L.D College of Engineering*, Ahmedabad
- 2009–2013 **Bachelor's Degree, Electronics and Communication Engineering**, *Sal Institute of Technology and Engineering Research*

## Technical Skills

Top Skills	Data Analysis, Python, Linux, Full-Stack Development, Infrastructure Management
Programming Languages	Python, R, C, Assembly Language, JavaScript, SQL
Web Technologies	Next.js, React, Node.js, HTML/CSS, RESTful APIs
Infrastructure & DevOps	Linux Server Administration, Docker, CI/CD Pipelines, Git, Self-hosted Solutions
Data Science & AI	Machine Learning, Deep Learning, Computer Vision, Data Analytics, Statistical Modeling
Embedded Systems	STM32, Microcontrollers, PCB Design, Circuit Simulation, Firmware Development
Tools & Platforms	MATLAB, Control Systems Toolbox, Image Processing, IoT Systems
Areas of Expertise	Embedded Systems, Full-Stack Engineering, Data Science, AI/ML, Infrastructure Management, Educational Technology

## Key Projects & Achievements

Smart Academic Portal	Led development of Next.js-based comprehensive academic management system featuring smart attendance tracking, assessment workflows, committee management, automated result processing, and real-time feedback analytics. Deployed using self-hosted Linux infrastructure with Docker, CI/CD pipelines, and backup systems.
Student Innovation Mentorship	Mentored student teams in IoT, drones, and embedded automation projects resulting in two patents, Rs. 25+ lakhs funding from Shark Tank India, and Rs. 20 lakhs government innovation support.
Infrastructure Management	Designed and maintained institutional IT infrastructure including self-hosted servers, network administration, and educational technology systems.

## Leadership & Administrative Roles

IT Convener	Leading institutional technology initiatives and infrastructure development
SSIP Co-Convener	Student Startup and Innovation Policy implementation and coordination
Training & Placement	Member of institutional placement and training committee
MIS & UDAYAM	Active contributor to Management Information Systems and UDAYAM initiatives

## Languages

English Full Professional  
Hindi Full Professional  
Gujarati Native or Bilingual

## Certifications

IIT Madras Diploma in Programming (Completed)  
NPTEL 100+ completed courses in AI/ML, Data Science, and related fields  
Business Analytics and Data Mining  
Modeling using R  
Artificial Intelligence: Knowledge Representation And Reasoning  
Cloud Computing  
Computer Graphics  
Discrete Mathematics

## Honors & Awards

2024-2025 Student Innovation Success: Teams mentored secured Rs. 45+ lakhs in funding (Shark Tank India + Government Support)  
2022-Present IIT Madras BS Data Science Program: Diploma in Programming completed, pursuing Diploma in Data Science  
December 2019 NPTEL DISCIPLINE STARS - Computer Science  
December 2019 NPTEL ENTHUSIASTS  
July 2019 NPTEL BELIEVERS

## Patents & Innovation

Student Mentorship Guided students for two successful patent applications with significant funding support  
Innovation Impact Contributed to student innovations receiving Rs. 25+ lakhs from Shark Tank India  
Government Recognition Student projects secured Rs. 20 lakhs through government innovation programs

## Professional Objectives

Short-term Pursuing AICTE Industry Fellowship to gain applied industrial research experience in AI, embedded computing, or system design  
Long-term PhD in AI, Embedded Computing, or System Design from premier institution; Contributing to diploma-level innovation ecosystem in Gujarat  
Vision Bridge industrial rigor with academic excellence to foster research-driven education and interdisciplinary collaboration

## Publications

Resisting Blind Steganalysis in Real Time Covert Communication