Amol Waghmare

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Bachelor of Technology
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EDUCATION

- **Bachelor of Technology in Information Technology** — *2023-27*
  AISSMS Institute of Information Technology, Pune — SGPA: 8.32

PERSONAL PROJECTS

- **Trackify - AI-Powered Goal Tracker**

  A web application for tracking and managing personal goals with AI-driven motivation.
  - Features SMART goal management, progress charts, daily task tracking, and AI-powered motivational insights.
  - Technology Used: Next.js, Firebase, TypeScript, Google Gemini AI, Firestore, Authentication.

- **ESP32 AI Voice Assistant - IoT Voice Assistant with Gemini AI Integration**

  A voice assistant system built using ESP32 microcontroller and Google Gemini AI for voice-based interactions.
  - Enables voice commands through ESP32 with text-to-speech and speech-to-text capabilities using mobile app integration.
  - Technology Used: Python, ESP32, Google Gemini API, MIT App Inventor, Mobile Speech Recognition.

- **Intelligent Inventory Management System (IIMS) - AI-Powered Inventory Portal**

  A web-based AI solution combining machine learning for sales forecasting and conversational AI for inventory management.
  - Manages inventory tracking, sales prediction using ML algorithms, real-time analytics, and NLP-powered query system.
  - Technology Used: Node.js, Express.js, MongoDB, TensorFlow, React.js, Natural Language Processing.

- **Local Employment System - Job Portal Web Application**

  A Flask-based web application connecting job seekers with employers in their local area.
  - Features intelligent job matching, role-based dashboards for employers and job seekers, real-time application tracking, and JWT authentication.
  - Technology Used: Flask, MongoDB, Python, JWT Authentication, HTML, CSS, JavaScript.

RESEARCH/PUBLICATION

- **AI-Driven and NLP-Powered Decision Support System for Sales Forecasting** — *Apr 2025*

  (ResearchGate)
  - Small and medium-sized enterprises (SMEs) are plagued by inventory mismanagement, which results in stockouts, overstocking and loss of money.
  - Intelligent Inventory Management System (IIMS), a web-based AI solution that combines machine learning for sales forecasting, natural language processing (NLP) and conversational AI.

- **An ESP32-Based Voice Assistant Integrating Gemini AI and Mobile Speech Recognition** — *Apr 2025*

  (IJARSCT Journal)
  - Development and implementation of a low-cost, fully customizable voice assistant that uses the ESP32 microcontroller, Google's Gemini AI for natural language processing, and a mobile app built using MIT App Inventor for speech recognition.

TECHNICAL SKILLS AND INTERESTS

Programming Languages: Java, C++, Python, JavaScript
Frontend Development : React.js, HTML5 & CSS3, Tailwind CSS, Bootstrap
Backend Development : Node.js, Express.js, RESTful APIs
Database & Tools : MongoDB, SQL, DBMS, Git & GitHub)
DSA & Core CS: Data Structures, Algorithms, OOP, Software Engineering and Project Management, Operating System
IoT & Emerging Tech: ESP32 IoT, Sensors, Machine Learning Basics, Information Security
Soft Skills: Self-Awareness, Learning & Adapting, Open to Feedback, Time Management

POSITIONS OF RESPONSIBILITY

- **Documentation Head** MLSA Club - AISSMS IOIT, Pune — *Aug 2024- Jul 2025*
  - Managed official documentation, including meeting minutes, event reports, and participant records and supported internal communication by organizing and documenting key discussions and decisions.

- **Executive** TENET Event - IOIT ACM Chapter — *Oct 2024*
  - Assisted in organizing and executing the TENET technical event with a team of student coordinators and collaborated with core team members to ensure smooth event flow and successful completion.