

Mohammed Shaan

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PROFESSIONAL SUMMARY

Results-driven dual-degree undergraduate student (B.Tech Computer Science & B.S. Data Science) with hands-on experience in software engineering, automation, and machine learning. Proven ability to build robust desktop applications, integrate local AI models, and design custom network infrastructure. Passionate about leveraging Python, data science principles, and LLMs to engineer practical, privacy-first solutions. Actively seeking software development and data science internship opportunities.

TECHNICAL SKILLS

- **Languages & Frameworks:** Python, C#, Pandas, Unity, CustomTkinter
- **AI & Data Science:** Machine Learning, Local LLMs (Ollama), Faster Whisper (Speech Recognition), Data Automation
- **Systems & Infrastructure:** Linux System Administration (Ubuntu), Cybersecurity Fundamentals, Raspberry Pi, Tailscale Mesh Networking, Pi-hole (DNS Filtering)
- **Tools & Methodologies:** Git, OCR, API Integration, Excel Automation, Algorithm Design

EDUCATION

Mahatma Gandhi Institute of Technology (MGIT) | Hyderabad, India *Bachelor of Technology - Computer Science* | Aug 2025 – Aug 2029

Indian Institute of Technology (IIT), Madras *Bachelor of Science - Data Science* | Sep 2025 – Present

SOFTWARE PROJECTS

CodenameProj | Voice-Enabled AI Assistant - Developed a fully offline, privacy-centric AI assistant utilizing local LLMs via Ollama and a dual-model architecture. - Integrated continuous speech recognition using Faster Whisper and implemented OCR-based screen vision capabilities. - Engineered file system control through voice commands and persistent memory, wrapped in a responsive dark-mode desktop GUI.

ATLAS | Academic Attendance Management System - Built a Python-based desktop application utilizing CustomTkinter to help students track and simulate academic attendance. - Automated data handling via native Excel automation and integrated an AI-powered academic calendar parser. - Enabled safe simulation of class skips for students without affecting baseline data integrity.

yt2mp3 | AI-Powered Audio Converter & Metadata Manager - Created an intelligent YouTube to MP3 pipeline that leverages a local LLM to parse and clean messy titles into structured track and artist data. - Enriched audio metadata automatically by querying the MusicBrainz API and scraping high-quality album artwork.

CollegeRanker | JoSAA Counselling Optimization Tool - Designed a desktop GUI application to streamline college and branch combination ranking during engineering admissions. - Implemented JSON data import, real-time manual ranking adjustments, advanced branch filtering, and one-click Excel exports.

MRAN | Formal Pseudocode Notation Standard - Authored a formal, strict, and language-agnostic pseudocode notation standard bridging mathematical formalism with programming logic. - Published a full specification detailing structured nesting and mathematical operator integration.

INFRASTRUCTURE & HOMELAB EXPERIENCE

Personal Homelab Architecture - Architected and maintain an Ubuntu Server and headless Raspberry Pi ecosystem. - Deployed network-level DNS filtering via Pi-hole to improve local network security and performance. - Securely interconnected all personal devices (Windows, Linux, Android) using a custom Tailscale mesh network, ensuring seamless remote administration.

CERTIFICATIONS & ACHIEVEMENTS

- **Smart India Hackathon (SIH)** — Participant
- **Niti Aayog** — Certification
- **Complete C# Unity Developer 3D** — Udemy
- **The Complete Ethical Hacking Course** — Udemy