

Manuel B George

AI/ML Engineer

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📄 PROFILE

Computer Science and Engineering student with a strong interest in building technology-driven products and practical experience in Artificial Intelligence, Machine Learning, and Computer Vision. Experienced in developing and evaluating AI-based solutions for real-world problems, with a focus on user needs, problem-solving, and product thinking. Actively involved in projects, hackathons, and self-driven learning, with an interest in collaborating across design, development, and innovation to create impactful digital products.

🏢 PROFESSIONAL EXPERIENCE

Infosys Springboard, AI Intern 10/2025 – 12/2025 Remote
• Developed and deployed Python-based Artificial Intelligence applications, gaining hands-on experience with core Machine Learning workflows.
• Implement data preprocessing, model training, and evaluation techniques to optimize predictive model performance.

🎓 EDUCATION

St Joseph's College Of Engineering And Technology, Bachelor of Technology: Computer Science And Engineering 09/2023 – Present Kottayam
Currently pursuing a Bachelor of Technology in Computer Science and Engineering at an accredited institution, gaining a solid foundation in programming, data structures, algorithms, and emerging technologies including Artificial Intelligence and Machine Learning

Placid Vidya Vihar, Senior Secondary (Class XI&XII) – CBSE 06/2021 – 03/2023 Kottayam
Completed CBSE Class XII with a standard science curriculum including Physics, Chemistry, Mathematics, and Computer Science, building a strong foundation in scientific thinking, mathematics, and basic programming concepts.

💡 SKILLS

Programming Language: Python • C • SQL

AI & Computer Vision: PyTorch • Scikit-learn • OpenCV • CNN • Vision Transformers (ViT) • RAG

Tools & Libraries: GitHub • NumPy • Pandas

Web & API: Streamlit • Gemini API • REST APIs

Hardware & Decentralization: ESP32 Microcontrollers • Smart Contracts • Arduino

📜 CERTIFICATES

Google Cloud Labs Certification | Generative AI | RoboAI: Industrial Training Certification from My Equation

📁 PROJECTS

SilentVoice (Assistive Medical Device)

- Architected and deployed a new medical device designed for care environments that translates intentional eye-blinks into Morse-coded speech and IoT-driven room automation commands.
- Engineered a real-time vision pipeline utilizing a CNN model and the Eye Aspect Ratio (EAR) method, processed through a high-performance tablet interface.
- Integrated ESP32 microcontrollers to bridge the vision model with external hardware, enabling paralyzed users to independently control their physical surroundings.

AI-Powered Audiobook & RAG Assistant

- Built an interactive audiobook platform featuring an integrated Retrieval-Augmented Generation (RAG) system for context-aware question answering.
- Optimized data retrieval pipelines to accurately pull and synthesize relevant book content, providing users with precise, real-time responses to complex narrative queries.

Mental Health Support Chatbot

- Developed a conversational AI agent integrating the Gemini API to deliver empathetic, contextually aware mental health support and dynamic user interactions.
- Built and deployed an interactive, user-friendly frontend web application utilizing Streamlit to ensure seamless user accessibility and clean UI design.

Multimodal AI Media Detection Pipeline

- Developed an end-to-end detection system to identify AI-generated images and videos by implementing a robust three-level verification architecture.
- Integrated foundational deep learning model detection, metadata (C2PA) watermark analysis, and Google SynthID detection to accurately classify synthetic media artifacts.

🏆 AWARDS

Jury Choice Award at Pitch Fest 2025, PALS 09/2025

Smart India Hackathon College Tier Winner, IEDC-SJCET 10/2025

8th position in Pitch Kerala 2026, Kerala State Youth Welfare Board 01/2026

YIP District Level Winner, K-DISC 03/2026