

Ananth Narayan Perumal

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Education

Bachelor of Engineering in Electronics and Communication

2023 - 2027

Vellore Institute of Technology, Chennai

CGPA : 8.78

Relevant Coursework: Digital Electronics & Logic Design, Microprocessors & Microcontrollers, Embedded Systems, Data Structures & Algorithms, Computer Networks, Digital Signal Processing, VLSI Design, Wireless Communication

Experience

Co-Founder | Click'd

2025 - Current

Self-Founded Venture

- Launched and scaled a photobooth startup, operating at **10+ events** within the first six months
- Generated **₹2.5 lakhs in revenue** in the first half-year through event partnerships and customer engagement
- Served **300+ customers**, delivering consistent, high-quality user experiences that increased brand visibility
- Processed **1,200+ photostrips**, optimizing workflow for speed, reliability, and customer satisfaction

Projects

[Clox Interpreter — Programming Languages Project](#)

- Implemented a complete interpreter and bytecode virtual machine in **C**, executing programs **10x faster** than a tree-walk-AST based interpreters
- Integrated **closures, dynamic typing, and 20+ opcodes**, enabling scalable execution of complex programs
- Designed a **mark-sweep garbage collector**, improving memory efficiency by **30%** and reducing leaks
- Built **debugging tools** (disassembly, opcode inspection), accelerating development and testing cycles

Gas Leak Alert System (8051 + GSM Module + Buzzer)

- Programmed an **8051 microcontroller** to detect gas leaks and trigger SMS alerts via **SIM900A GSM module**
- Added a **buzzer-based alarm** for on-site sound alerts, ensuring rapid response with **<1s detection time**
- Built a reliable **real-time embedded system** with robust sensor interfacing and fail-safe alert mechanisms

Wearable Health Monitoring Device (ESP32 + MPU6050 + MAX30102 + GSM)

- Developed a **wearable device for elderly care** to monitor heart rate, oxygen levels, and detect falls in real time
- Integrated **MPU6050 and MAX30102 sensors** with a **GSM module** to send automated SMS alerts during emergencies
- Achieved **sub-second detection and alert response**, ensuring reliable remote health monitoring

Technical Skills

Programming Languages: C/C++, Python, Java

Microprocessors/controllers : 8051, 8086, RaspberryPi, Arduino, ESP32

Tools & Platforms: Git, Github, Supabase, Postman, Matlab, Verilog, Vercel, Arduino IDE

Concepts: Digital Signal Processing, Computer Networks, System Design, AWS