



MADHAVA BRIGHTLY A

PROMPT ENGINEER

<https://madhavabrightly.github.io/portfolio-main/#projects>

About Me

IT professional specializing in multi-model prompt engineering pipelines that connect high-level system architecture with granular code generation to accelerate development. Adept at translating technical requirements into structured LLM context to automate data workflows, streamline debugging, and rapidly deploy secure web, mobile, and AI applications.

Contact

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Education

(2022 - 2026) **ANNAMALAI UNIVERSITY**
BE-INFORMATION TECHNOLOGY

LANGUAGE

TAMIL
ENGLISH
LATIN-BEGINNER

Skills

- Python, JavaScript
- AI/ML (YOLO, Deep Learning)
- FinTech Simulation Systems
- Linux Administration
- Figma (UI/UX Design)
- Problem Solving & Algorithms

Current Work

- Engineered automated testing frameworks to monitor system hooks, network interfaces, and audio hardware routing under virtualization to analyze mobile system behaviors.
- Mastering vanilla JavaScript and native runtime APIs on the fly to build optimized data extraction pipelines and real-time scrapers for AI workflows.
- Managed a successful technical freelancing portfolio, delivering custom full-stack web, mobile, and AI applications for client and academic requirements.
- Structured a personal development routine balancing advanced technical research with wellness habits to maximize cognitive performance and prevent burnout.

PROJECTS

2025

SYNTHETIC MARKET

Developed a synthetic market simulation web application enabling users to practice trading strategies in a risk-free environment, incorporating realistic market dynamics, advanced order execution logic, and a hybrid trading bot combining rule-based and algorithmic strategies with a 40% target profit model and 20% automated stop-loss/auto-close mechanism to simulate disciplined trading behavior

2024

FACIAL RECOGNITION USING AI

Developed an AI-based facial emotion recognition system that detects and classifies human emotions from facial expressions using computer vision and deep learning techniques, enabling accurate real-time analysis

2026

PYTHON SCREEN RECORDER

Developed a crash-resilient Windows desktop recorder utilizing FFmpeg to capture stable 60 FPS video alongside a dual-channel microphone and system loopback audio mixer. Engineered real-time hardware hot-swapping to adapt to audio device changes mid-recording, integrating spectral grating filters and low-frequency rumble removal to eliminate background noise.

Analysis of Your Workflow

- AI-Assisted Software Design:** Architected a multi-stage prompt engineering workflow utilizing Gemini Pro for structural application design and OpenAI Codex/Trae for granular code generation, debugging, and implementation.
- Agile Prototyping & Research:** Standardized a development pipeline combining physical UX wireframing with deep technical research to scope advanced feature requirements, such as real-time audio isolation and dynamic hardware hot-swapping.

Generated by TRAE AI

"GUIDED BY FAITH AND STRENGTH"