

Gourob Debnath

Software Engineer

gourobdn15@gmail.com | +8801914873631 | Sylhet, Bangladesh (open to remote/relocation) | linkedin.com/in/gourob-debnath-b41730165 | github.com/Gourob47 | [Portfolio](#)

Summary

Over the last two years, I've built AI-heavy products end to end, from the backend and model integration through to what the user actually sees. That includes a multi-agent healthcare assistant, an internal tool that lets a team chat with multiple LLM providers side by side, an AI content pipeline for e-commerce brands, and pricing tools for a capital markets firm. I like owning a system fully rather than just one layer of it, and lately I've been getting into running models locally instead of always calling out to an API.

Experience

Software Engineer, SJ Innovation LLC

2024 – Present

Healthcare AI Platform : Simple Therapy (simpletherapy.com)

- Designed and led end-to-end delivery of the multi-agent AI architecture powering Sara, a production healthcare agent serving 500+ active users: specialized agents collaborating on intent analysis, context retrieval, and response generation.
- Contributed to Model Context Protocol (MCP) integration for secure agent-to-service tool execution, and a long-term memory layer (Mem0) combining semantic search with contextual reasoning for persistent, personalized conversations.
- Built voice-enabled agent interactions and production observability (Braintrust) for AI quality, safety, and latency monitoring, on top of FastAPI backend services with Auth0/JWT authentication and PostgreSQL/Amazon DocumentDB storage.

ICR AI : Multi-LLM Enterprise Chat Platform

- Built ICR AI, a multi-provider LLM gateway (OpenAI, Anthropic Claude, Google Gemini) with streaming chat, conversation memory, and admin-configurable models and API keys.
- Integrated the OpenAI Assistants API: custom assistants, threads, file RAG, Code Interpreter, and function calling against PostgreSQL, plus token/cost tracking (tiktoken) with usage reporting for admins.
- Built a ChatGPT-style React UI with Socket.IO streaming, an assistant builder, Azure AD SSO, and role-based access control.

ICR Capital : Convertible & Call-Spread Advisory Platform

- Built core backend for ICR Capital's convertible advisory platform: a multi-step call-spread bidding and syndicate-ranking system, finite-difference convertible and call-spread pricers, and a 33-sheet Excel deal warehouse, delivered as JWT-secured REST APIs consumed by a React/Node frontend.
- Implemented derivatives pricing logic in Python (NumPy/SciPy): Black-Scholes and Crank-Nicolson grids, SK10 vol-spread, Greeks, implied vol/credit spread, FRED Treasury curve integration, and greedy syndicate construction from bank submissions.

ImagineCreate AI : AI Content Studio for Commerce (imaginecreate.ai)

- Designed and shipped AI generation workflows for e-commerce marketing (product background replacement, text-to-image, AI image editing, text-to-video), wrapping multiple model providers (Stability AI/SDXL, Midjourney, GCP, OpenAI, Pictory) behind a single product experience.
- Built Express APIs and media pipelines (AWS S3/Lambda, Sharp, PhotoRoom) handling real media end to end, and React features for a full generate to edit to caption to publish flow, including an in-browser editor and direct publishing to Shopify and social platforms.

Selected Projects

AssesGen : AI-Powered IELTS Question Generation & Evaluation Platform (*In development*)

- Building a multi-agent system for automated IELTS question generation and evaluation, running fully on locally hosted models (Gemma for generation/evaluation, a local TTS model for speech) rather than external cloud APIs, with agent orchestration for content generation, scoring, and feedback.

Founder & Developer : IELTS Ready (ieltsready.org)

- Designed and built a multi-tenant SaaS platform for IELTS preparation, including automated scoring, mock/partial examinations, instructor dashboards, and role-based access control.

Technical Skills

- AI & LLMs: OpenAI (Assistants API, Chat Completions API), Anthropic Claude, Google Gemini, multi-agent systems, tool/function calling, MCP, prompt engineering, structured outputs, guardrails, Mem0, ElevenLabs, local/on-device deployment (Gemma, TTS), image/video generation (Stability AI/SDXL, Midjourney, GCP models, Pictory), tiktoken, Braintrust
- Backend: Python, FastAPI, Django/DRF, Node.js/Express, REST APIs, async programming, background tasks, Socket.IO, media pipelines (Sharp, PhotoRoom)
- Frontend: React, Next.js, TypeScript, Tailwind CSS, Ant Design
- Data & Quant: PostgreSQL, MongoDB, Amazon DocumentDB, MySQL, NumPy, SciPy, pandas, openpyxl
- Auth & Integrations: Auth0, JWT/JWKS, PyJWT, Azure AD/MSAL, Shopify, FRED API, TikTok/LinkedIn/Facebook/Twitter APIs
- Cloud & DevOps: AWS (S3, Lambda, Secrets Manager), Docker, Linux, Git, GitHub Actions, Gunicorn

Education

B.Sc. in Computer Science & Engineering

Metropolitan University, Sylhet | CGPA: 3.54 / 4.00

Achievements

- Solved 750+ problems across competitive programming judges. Participant, ICPC Dhaka Preliminary (multiple years).
- Judge & Problem Setter, MU Intra Programming Contest.