



Muhammad Hammad Irfan

Islamabad, Pakistan | +92 325 6115055

mohammadhamdirfan1@gmail.com | mirfan.bscs23seecs@seecs.edu.pk

[Portfolio](#) | [LinkedIn](#) | [GitHub](#) | [Resume](#)

ABOUT

Full-stack developer with strong backend focus and hands-on experience integrating LLMs, building workflow automations, AI agents, and orchestrating multi-system solutions. Skilled at developing productiongrade applications using Node.js, Next.js, Python, Supabase, and AI tooling. Enjoy solving real-world problems by combining CRMs, databases, APIs, and AI models into reliable systems.

EDUCATION

National University of Sciences & Technology (NUST)

Bachelor of Science in Computer Science (SEECS)

Islamabad, Pakistan

Sep 2023 – Present

Aspire College Faisalabad

Intermediate (Pre-Engineering) | Grade: 87.5%

Faisalabad, Pakistan

Sep 2021 – June 2023

EXPERIENCE

AI & Software Developer (Industry Project)

KidneyCare Clinical Assistant

SEECS, NUST

June 2025 – Present

- Built a clinical decision support system incorporating rule-based AI logic for nephrologists.
- Designed workflows handling unreliable inputs, missing labs, and safety-critical medical logic.
- Architected structured output flows for real physicians to review recommendations.
- Led MVP delivery for domain experts and medical faculty.

LLM & Agentic Automation Development

Independent Work & Research

Jan 2025 – Present

Core Research & Implementation

- Implemented agentic workflows with function calling, retrieval, embeddings, and tool execution.
- Built pipelines involving reasoning → tool invocation → DB write-back → scheduling.
- Integrated Supabase (Postgres + PGVector) for hybrid structured + vector storage.
- Designed multi-system automations bridging APIs, CRMs, LLMs, and data layers.

Web Developer Intern

AskUsSolution (Remote)

July 2024 – Aug 2024

Frontend and Backend Fundamentals

- Collaborated with the team on small-scale projects and improved understanding of React, Node.js, and Git-based workflows.
- Gained hands-on experience with REST APIs, UI development, and deployment basics.

PROJECTS

EduSync – A Role-Based University Automation Platform

- Built workflows for scheduling, onboarding, invoicing, and attendance automation.
- Designed RBAC structure using Next.js, Supabase, and Prisma ORM.

MI Printer Automation Tool

- Developed automated pipeline for parsing, preprocessing, and formatting prints for MI devices.
- Designed UI + backend coordination for predictable batching and device interactions.

LingoMate – An AI-Powered Web Application

- AI conversational app for improving English fluency in real-time.
- Built with React.js, integrates speech-to-text, text-to-speech, and GPT-based responses.

SKILLS

Core Stack: Node.js, Python, Next.js, React, Express

AI / Automation: LLM Function Calling, Embeddings, Vector DBs (PGVector), LangChain, LlamaIndex, n8n, Workflow Automation, AI-Agents, Prompt Engineering

Databases: PostgreSQL, MySQL, Supabase, MongoDB, Redis

Cloud / Tools: Git, GitHub, Vercel, Firebase, Prisma ORM, Webhooks, REST APIs, Docker & AWS (Basic)

Concepts: OOP, Data Structures, API Design, System Architecture, Workflow Automation

Soft Skills: System Thinking, Architecture Design, Data Flow Modeling, Reliable AI Pipelines, Problem Solving, Clean Code