

DIP SAHA

Full Stack Developer & AI Solutions Architect

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PROFESSIONAL SUMMARY

Innovative Computer & Communication Engineering student and Full Stack Developer with specialized expertise in **AI Software Development**, **Cybersecurity**, and **Full Stack Web Architecture**. Proven record of shipping complex, data-driven applications — from **Custom Admin Panels** and **POS Systems** to **RAG Chatbots** and a **multi-agent cyber-threat detection pipeline** achieving 91% detection accuracy. Passionate about bridging advanced backend logic with pixel-perfect frontend interfaces using Python, Next.js, and Gemini AI.

TECHNICAL SKILLS

- AI, ML & Data Science:** Python, LangChain, Google Gemini API, OpenAI API, Pinecone (Vector DB), Streamlit, Pandas, NumPy, Matplotlib, Seaborn, Jupyter
- Backend & Databases:** PHP, MySQL, SQL
- Frontend Development:** React.js, Next.js, Tailwind CSS, HTML5, CSS3, JavaScript (ES6+), Chart.js, Figma-to-Code
- Tools & Platforms:** VS Code (Codeium/Windsurf), Git/GitHub, Vercel, cPanel

KEY PROJECTS & FREELANCE EXPERIENCE

Shakh's Makeover — Full Stack E-Commerce & Admin Platform | *Live Project*

URL: www.shakhsmakeover.site

- Architected a complete web application with a **Custom Admin Panel**, giving the client full control over Products, Services, Promo Codes, and User Management.
- Engineered complex backend logic for automated **Custom Notifications** and secure user authentication.
- Delivered a high-performance, responsive frontend ensuring a seamless booking experience.

Electronics Shop POS (Point of Sale) System | *Full Stack Software*

URL: shop-pos-demo.netlify.app (Demo Link)

- Developed a custom POS solution tailored for electronic retail, managing **Real-time Inventory**, Sales History, and Warranty Tracking.
- Built dynamic reporting features to track daily revenue, stock alerts, and print invoices.
- Optimized the database structure to manage thousands of transactions without latency.

Custom AI Chatbot & Agent Development | *Freelance / Fiverr*

- Developed a "Knowledge Base" chatbot using **Python, LangChain, and Google Gemini Pro** that reads custom PDF documents and answers user queries with 100% accuracy (RAG).
- Integrated **Pinecone Vector Database** to enable real-time semantic search for business clients.

Dipa Saha — Full Stack Personal Portfolio & Admin Platform | *Live Project*

URL: dipa.ami.bd

- Architected a complete personal portfolio web application with a **Custom Admin Panel**, giving the client full control over the site.
- Built secure user authentication alongside automated **Custom Notifications** to keep the backend running smoothly.
- Delivered a polished, high-performance frontend for a smooth, professional browsing experience.

Arnab Acharjee Portfolio — Full Stack Portfolio Website | *Live Project*

URL: arnabchri.com

- Built a lightweight, secure, high-performance portfolio on a custom PHP/MySQL stack, including a **proprietary admin dashboard** for content, asset, and project management.
- Delivered a cinematic, dark-mode UI with optimized CSS3 animations and vanilla JavaScript (ES6+), including professional case-study layouts.

Tech: PHP 8, MySQL, HTML5, CSS3, JavaScript (Vanilla ES6+)

Viral Content Lab — Full Stack AI Idea Generator & Admin Platform | *Live Project*

URL: vcl.free.nf

- Architected a complete web application with a **Custom Admin Panel**, giving the client full control over the site, users, subscriptions, and website visits.
- Engineered complex backend logic using the **Groq API** to generate ideas, plus secure user authentication.
- Delivered a fast, responsive frontend that keeps the idea-generation flow smooth end to end.

PranBachao Network — Bangladesh's First Animal Rescue Platform | *Live Project*

URL: pranbachao.com

- Built Bangladesh's first nationwide animal rescue network, enabling the public to report injured animals, search for lost pets, and connect directly with veterinarians.
- Designed a **multi-role volunteer system** (Veterinarians, Rescuers, Transporters) to onboard and coordinate rescue-network volunteers nationwide.
- Delivered a responsive, public-facing platform focused on fast reporting and clear calls to action.

Tech: PHP, JavaScript, Tailwind CSS, SQL

Demo Project: Microjob Site — microjob-demo.netlify.app

ACADEMIC & TECHNICAL PROJECTS

Multi-Agent Cyber Defense System | *Course Project — Cryptography & Network Security*

URL: dip.pro.bd/macds_project/dashboard.html

- Designed a three-agent AI pipeline for automated cyber-threat detection and response: a **Threat Hunter** (MITRE ATT&CK-based risk scoring), a **Log Analyzer** (multi-agent attack correlation), and an **Incident Responder** (risk-aware automated mitigation).
- Built a shared JSON memory module (*agent_memory.json*) enabling persistent learning and asynchronous communication across all three agents.
- Achieved **91% detection accuracy** with a **2-minute mean incident response time**.

Tech: Python 3.14, Pandas, NumPy, Matplotlib, Seaborn, HTML5, Chart.js, Jupyter

EDUCATION

Higher Secondary Certificate (Science) — Omargani M.E.S. College | GPA: 5.00/5.00

B.Sc. in Computer & Communication Engineering — International Islamic University Chittagong (IIUC)

- *Session:* 2022 – Present
- *Relevant Coursework:* Programming (C/C++), Data Structures, Digital Communication, Microprocessor Design

LANGUAGES

- **English:** Professional Working Proficiency
- **Bengali:** Native