

# Arnab Gupta

Software Developer

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## Professional Summary

Full-stack software developer with 5 years of experience specializing in AI-powered solutions and web applications. Spearheaded an intelligent AI onboarding pipeline using LangGraph and LangChain, improving user retention by 28 percent and boosting early user engagement metrics across the platform. Improved core processing logic to handle 1,000+ invoices monthly, refined LLM output strategy to reduce response time lags across 500+ user sessions weekly, and contributed to reducing scheduling errors by 25 percent through backend optimization. Also explored Hugging Face models for multilingual NLP support. Experienced in building scalable, efficient and intelligent systems that improve automation, user satisfaction, and performance.

## Technical Skills

**Languages:** Python, JavaScript, TypeScript

**Frameworks:** Django, Flask, FastAPI, React.js, Next.js, Node.js

**AI / ML / LLM:** LangChain, LangGraph, LlamaIndex, Pinecone, ElevenLabs, Travily, Hugging Face, RAG, Prompt Engineering, PyTorch (learning)

**Databases:** PostgreSQL, MongoDB, Supabase, SQLite

**Dev Tools:** Git, Docker, Postman, VSCode, Vite

**Cloud Platforms:** Vercel, Heroku, AWS (familiar)

**Testing:** Learning Pytest, Jest, React Testing Library

**Other Tools & Practices:** API integration, vector DB tuning, prompt optimization, modular deployment, Agile/Scrum

## Education

**Secondary Education** — West Bengal Board of Secondary Education

Barasat — 2011-2012

Grade: 69.57%

**Higher Secondary** — West Bengal Council of Higher Secondary Education

Barasat — 2013-2014

Grade: 50.00%

**B.Sc. (General)** — University of Calcutta

2015-2020

Grade: 41.00%

## Experience

**Software Developer** — Weavers Web Solution Pvt. Ltd.

June 2022 – Present — On-site, Kolkata

- Composed 12+ full-stack web platforms using Django, FastAPI, React, and Next.js
- Deployed AI-based systems, including RAG chatbots, improving query resolution speed by 40
- Reduced frontend load times by 35 percent optimizing image compression and lazy loading techniques, enhancing user experience and decreasing bounce rates across key landing pages
- Directed and mentored a 4-member team delivering 6+ applications over 12 months
- Rectified over 90 critical software defects, enhancing system stability and user experience across six production-grade applications, while adhering to stringent coding standards and project deadlines

**Freelance Python Developer** — Remote

June 2020 – May 2022

- Engineered and deployed 8+ Django-based platforms with secure authentication and RESTful APIs
- Delivered interactive dashboards and user flows, increasing user session length by 30 percent and boosting engagement metrics by 15
- Integrated 5+ third-party APIs (Stripe, Cloudinary, Google Analytics) to enhance product functionality

## Projects

### Plugg — AI-Based Social Media Platform

- Pioneered an AI-powered onboarding pipeline leveraging LangGraph and LangChain, personalizing user experience and accelerating new user activation by 28 percent, directly impacting user lifetime value
- Implemented a matchmaking recommendation engine using Pinecone and RAG, matching users across 5+ traits with 85 percent accuracy (user testing phase)
- Refactored LLM pipeline with threading, reducing chatbot latency by 50 percent across 500+ sessions
- Authored a scalable LLM application using Flask, LangChain, and LangGraph, decreasing response times by 40 percent and improving vector retrieval speeds across 10,000+ user interactions

### QR Floor Geanie — Invoice Intelligence System

- Automated product extraction from 200+ invoice templates using LlamaIndex and custom prompt pipelines
- Implemented Supabase edge function workflows, reducing manual processing time by over 60

### Nora — AI Voice Assistant

- Programmed a voice-interactive assistant that handled 100+ user commands for notes, alarms, news, and reminders
- Reduced task latency by approx. 1.5 seconds per query after optimizing asynchronous operations (based on manual testing over 30 hours of usage)

### Elite Home Care — Internal Management System

- Designed and maintained an admin portal managing 500+ appointments monthly and 25+ active users
- Optimized image compression algorithms and reduced redundant code, decreasing AI voice assistant app load time by 30 percent, improving user experience and interface response times
- Enhanced UI flow to minimize staff coordination delays by 40 percent through UX restructuring
- Collaborated with 4+ stakeholder teams to streamline patient workflows, leading to 25 percent fewer scheduling errors