

# Ankit Dey

## Backend AI Developer

### Multi-Agent Systems & Production Bots | RAG Pipelines | Full-Stack AI Integration

Specializing in multi-agent orchestration pipelines, and production grade bot infrastructure serving 200k+ users, shipping end-to-end AI systems. Currently focusing on agentic AI systems and scalable backend architecture.

## Contact

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## Highlights

- Engineered the verified Discord Bot - Sync Music used by 200k+ users across 2k+ active servers inside discord using TypeScript, Discord.js v14, Node JS, Mongo DB, and Lavalink-powered audio streaming paired with shokaku wrappers.
- Built multi-agent orchestration pipelined creator intelligence dashboard using vector embeddings, KMeans clustering, and RAG to turn raw comments into advanced insights increasing creator productivity by 56%

## Skills

**Languages:** Python, TypeScript, JavaScript, basic Rust & Solidity

**Frameworks & Libraries:** LangChain, LangGraph, React, Next.js, Fast API, Node.js, Discord.js

**Databases & Storage:** Chroma, Pinecone, Supabase, MongoDB, Redis

**Tools:** Mongoose, Supabase Client, Termius, Postman, Vercel

**DevOps & Cloud:** Docker, AWS (S3, EC2), Git, GitHub

**AI & LLMs:** Orchestration Pipelines, Vector Stores, Fast Rag Systems

**Styling & UI:** ShadCN, Framer Motion, GSAP, Google Stitch

## Languages

- English (Fluent)
- Bengali (Native)
- Hindi (Professional)

## Education

### Bachelor of Technology (Computer Science)

2024 - 2028

Narula Institute of Technology (makaut affiliated)

- SGPA:** 8.45 / 10
- Year:** 2nd
- Relevant Coursework:** Data Structures And Algorithm, NLP & ML, Artificial Neural Networks & Deep Learning Intelligence

## Experience

### Backend AI Developer

2025 - Current

Independent Generative OSS

- Implemented multiple orchestration pipelines paired with embedding-driven semantic indexing with clustering (KMeans) from high-volume text signals.
- Architected production grade retrieval-augmented generation (RAG) systems for grounded summarization and query-time synthesis

### Freelance

2025 - 2025

Web & AI Automation Freelance

- Shipped multiple client-facing web experiences as a freelancer, designing sleek, performant and a polished UI/UX layer backed by a reusable component architecture cutting design-dev sync time by 60%.
- Implemented conversational automation systems with a massive growth in business by 37% and a significant reduction in manual workload

### Discord Developer

2024 - 2025

Sync Music (Discord Music Bot)

- Built and scaled multiple production-grade Discord bots with a focus on reliability, performance, and user-base all inside discord using discord.js.
- Developed Sync Music to 200k+ unique discord users over 2k+ servers turning it into a source of passive income through premium distribution.

## Projects

### Tubeinsight

**Tech Stack:** Python, LangChain, ChromaDB, KMeans Clustering, Embeddings, RAG, FastAPI

#### Impacts:

- Built an end-to-end raw comment ingestion pipeline with embedding-based semantic indexing and KMeans theme discovery.
- Started with pre-processing and cleaning input data, passed through 4 agent orchestration pipeline to generate queryable insights through RAG improving discovery speed by ~30% and reducing manual analysis effort by ~50%.

### E.A.R-DrivenAtten

**Tech Stack:** Python, MediaPipe, OpenCV, EAR Algorithm, Matplotlib, Numpy

#### Impacts:

- Developed a real-time attention monitoring system implementing 468-point facial landmark tracking and Eye Aspect Ratio (EAR)-based scoring.
- Achieved 94.3% detection accuracy for real-time blink and attention monitoring applications.

### Sync Music

**Tech Stack:** TypeScript, Discord.js v14, Node.js, MongoDB, Lavalink, shokaku.js

#### Impacts:

- Engineered a production-grade Discord music bot serving 200k+ users across 2k+ servers with reliable, low-latency audio streaming.
- Built a pluggable command/event architecture with MongoDB-backed persistence for user data and queue management.
- Implemented premium and vote-locked feature gates enabling passive income.

## Achievements

- SIH 2025 Finalist**
- Hack-O-NiT 2026 Finalist**