

Aviroop Mitra

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PROFESSIONAL EXPERIENCE

Neurologic-ai | Machine Learning Intern

Nov, 2023 – Jul, 2025

Intelligent Claim Orchestration in Guidewire | Skan AI

May – Jun, 2025

Automated claim creation and assignment in **Guidewire ClaimCenter** with a vision-to-reasoning pipeline that pairs **GPT-4 Vision/Text (async Python)**, prompt-engineered with token-cost guardrails) and a **hierarchical scorer** operating on a **30-event window**. Delivered **80%** confidence (+23 pts over benchmark) and **halved inference latency**.

Document Intelligence Platform | Carelon Health

Mar – May, 2025

Streamlit-based interface drives a **PDF-to-image** flow where a **layout-transformer** isolates semantic zones; cropped sections are passed to async **GPT-4 Vision** (backed by **Mistral OCR** and **Python imaging**) and rendered with **Pandas**. The generalized architecture now ingests diverse healthcare documents and keeps end-to-end latency under **3s** without sacrificing accuracy.

PwC India | Advisory Intern

Jun – Jul, 2024

Full-Stack Ticket Platform

Jun – Jul, 2024

Angular + **Spring Boot** + **MongoDB** stack with **JWT**-secured role-based access. Provides a real-time ticket dashboard, template creation/search, appraisal & query threads, and an animated UI—while keeping CRUD latency under **50 ms**. An **API Gateway** and **client-side service discovery** route traffic to horizontally duplicated ticket and auth services for effortless scale-out.

EDUCATION

Jadavpur University | Bachelor of Engineering - BE (Hons.) in Computer Science and Engineering | GPA: 8.25 (76.3%)

Dec, 2021 – Jul, 2025

Burdwan Municipal High School | Higher Secondary in Science | GPA: O (93.4%)

Jul, 2019 – Mar, 2021

Burdwan Town School | Secondary | GPA: AA (95.14%)

Jan, 2011 – Mar, 2019

PROJECTS

CVPipeline | [GitHub](#)

Jul, 2024 – Jul, 2025

- Implemented a **6-step pipeline** using **linkedin-api**, **openai**, **Google Knowledge Graph API**, **PyGithub**, **httpx**, and **Playwright** to fetch LinkedIn data, AI-optimize content, validate URLs, and generate responsive HTML and print-ready PDF resumes.
- Configured an **SQLite** cache with **24-hour TTL** and automatic cleanup to store **LinkedIn**, **Google Knowledge Graph API**, and **job search API** responses, minimizing redundant requests.
- Developed **AI-powered openai_processor** module to perform skill filtering, project extraction, and technical highlighting through **three** core content optimization steps.

VARC_APP | [GitHub](#)

Apr, 2025

- Implemented **Python web scraping** modules to fetch articles from The Hindu and The Telegraph.
- Developed a topic-based probability engine with **20%** business, **50%** science, **20%** art, and **10%** philosophy weights to deliver a consistent daily article.
- Designed **Streamlit** UI with modular components in app/components, scrapers in app/scrapers, utils in app/utils, and main.py orchestration.
- Enabled article caching in a data directory and streamlined setup via **requirements.txt** and **streamlit CLI**.

distributed-p2p-network | [GitHub](#)

Mar, 2025

- Implemented a distributed **Python 3.8+** system with **5 main nodes** for coordination, **10 data nodes** for chunk storage, and **10 compute nodes** for embedding generation.
- Configured ports **8000–8999** for task distribution and health monitoring on main nodes, **9000–9999** for data replication and persistence on data nodes, and **10000–10999** for real-time similarity searches on compute nodes.
- Developed **chunk-based storage** and **semantic search pipelines** using **pip-managed packages**, **virtual environments**, a frontend on **port 8501**, and API documentation on **port 8000/docs**.

SKILLS

Programming Languages: Python, C++, JavaScript, SQL, Java, C

APIs & Libraries: Node.js, Pandas (Software), NumPy, Scikit-Learn, FastAPI, SQLAlchemy

Databases & Data Storage: MySQL, MongoDB

Testing & QA: pytest

Machine Learning & Data Science: Prompt Engineering, Convolutional Neural Networks (CNN), Transformers, Recommender Systems

DevOps & Cloud: API Gateways

AWARDS & ACHIEVEMENTS

GATE CS, 2025 | AIR 65, 99.96 percentile

Feb, 2025

Senior Scholar | Jagadish Bose National Science Talent Search | 98.98 percentile

Jul, 2022

Junior Scholar | Jagadish Bose National Science Talent Search | 98.5 percentile

Mar, 2020