

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 |

Dec, 2021 – Jul, 2025

GPA: 8.25

Burdwan Municipal High School | Higher Secondary in Science | GPA: O

Jul, 2019 – Mar, 2021

Burdwan Town School | Secondary | GPA: AA

Jan, 2011 – Mar, 2019

PROJECTS

my-resume | [GitHub](#)

Jul, 2024 – Jul, 2025

- Implemented a 6-step modular Python pipeline from LinkedIn data fetching to PDF generation with asyncio-based modules featuring logging and error handling.
- Developed an AI enhancement module using OpenAI o4-mini to filter 47 skills, extract 2 projects, and highlight 5 technical skills asynchronously.
- Integrated a URL validation system with httpx supporting 10 concurrent requests to validate 5 URLs with 100% success rate.
- Generated responsive HTML and PDF using Playwright with dynamic CSS, completing 6 pipeline steps in 62.3 seconds.

VARC_APP | [GitHub](#)

Apr, 2025

- Developed a Streamlit app that scrapes articles from The Hindu and The Telegraph using Python modules under app/scrapers.
- Implemented daily article selection with fixed output per day employing topic-based probabilities (Business 20%, Science 50%, Art 20%, Philosophy 10%).
- Structured the codebase into UI components in app/components, scraping logic in app/scrapers, utilities in app/utls, and main entry in app/main.py.
- Integrated caching of articles in data/ and managed dependencies via requirements.txt.

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

Mar, 2025

- Deployed Python 3.8+ distributed text processing system across three node tiers: 5 Main, 10 Data, and 10 Compute nodes coordinating via ports 8000-10999.
- Implemented chunk-based storage and replication on 10 Data Nodes using Python services to manage persistence and distribution.
- Designed semantic search capabilities and embedding generation on 10 Compute Nodes leveraging Python for similarity analysis and real-time text chunk processing.
- Established load balancing and health monitoring across 5 Main Nodes to coordinate task distribution and oversee API operations.

SKILLS

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

AI & Machine Learning: Machine Learning, Deep Learning, Natural Language Processing (NLP), Transformers, Convolutional Neural Networks (CNN), Recommender Systems

APIs & Libraries: REST APIs, Node.js, Angular, Spring Boot, Pandas (Software), NumPy

Databases & Data Storage: MySQL, MongoDB, SQL

Testing & QA: pytest

DevOps & Cloud: Git

AWARDS & ACHIEVEMENTS

GATE CS, 2025 <i>AIR 65, 99.96 percentile</i>	<i>Feb, 2025</i>
Senior Scholar Jagadish Bose National Science Talent Search <i>98.98 percentile</i>	<i>Jul, 2022</i>
Junior Scholar Jagadish Bose National Science Talent Search <i>98.5 percentile</i>	<i>Mar, 2020</i>