

Anish Sarkar

Kolkata | anishsarkar282@gmail.com | LinkedIn | GitHub | Portfolio

Education

Techno Main Salt Lake	Nov 2022 – Present
Bachelor of Technology, Information Technology	
Beachwood School	Jul 2019 - Jul 2021
Higher Secondary	
St. Xavier's School	Apr 2007 - Jun 2019
Secondary	

Experience

Research Intern (Research Paper ↗)	Kolkata, WB
IEEE Computational Intelligence Society	June 2025 – Present

- Analyzed evolutionary computation techniques and **Genetic Algorithms (GAs)** for ligand-protein interaction energy minimization in drug design using variable-length tree models
- Created and delivered a technical presentation summarizing the algorithmic design and results of the **Neighbourhood Based Genetic Algorithm (NBGA)** approach
- Developed and published a complete implementation of the NBGA algorithm using TSPLIB datasets to generate benchmark graphs and validate results ([GitHub link ↗](#))

Projects

Smart India Hackathon 2024 (a 36-hour Hackathon)	GitHub Link ↗
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- Won **2nd place among 500+** teams with 5 peers in Punjab, developed a mentorship platform serving **1000+** potential users
- Built features for mentor-mentee matching with **92.3% compatibility accuracy**, real-time scheduling handling **50+ concurrent sessions**, and AI-driven career guidance processing **200+ queries/hour**
- Tech Stack: React.js, Tailwind CSS, Flask, Python, Firebase, Docker, Cal.com API, GetStream Webhooks, HuggingFace, Kaggle datasets

Farmalyze: Smart Agriculture System	Live Demo ↗
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- Implemented 3 ML models for crop recommendation, fertilizer suggestion, and plant disease detection with **89.1%+ accuracy** using **90,100+ combined samples** from Kaggle crop dataset (2,200 samples), fertilizer dataset (23 crops), and plant disease dataset (87,900 RGB images)
- **Reduced crop failure prediction time by 78.6%** through automated analysis of 7 key agricultural features
- Built Flask RESTful APIs handling **500+ requests/day** with OpenWeatherMap integration and real-time soil analysis
- Tech Stack: Python, React.js, Flask, ML (scikit-learn, TensorFlow, PyTorch), Supabase, Docker

Loopr: Cron-Job Application	Live Demo ↗
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- A distributed uptime monitoring platform that processes **webhooks** and **100+ URLs per worker node** with **5-minute to 24-hour ping intervals**, **4-shard result distribution** and 30-second auto-refresh updates
- Features **dynamic load balancing** across **5+ worker nodes**, **batch processing of 350-400 URLs and webhooks**, and Svelte dashboard with real-time status updates and 100-entry history retention
- Tech Stack: Svelte, SvelteKit, Appwrite, Docker

Scribit: Full Stack Notes Application	GitHub Link ↗
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- Developed a secure notes app with JWT auth, Supabase PostgreSQL, and user-specific CRUD functionality
- Tech Stack: React.js, Django, Supabase PostgreSQL, Docker

Technologies

Languages: Python, Java, JavaScript, C, SQL

Technologies: Flask, Django, Svelte, scikit-learn, TensorFlow, PyTorch, Docker, Git, UNIX, Bash, AWS