

BISWAJIT SATAPATHY

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EDUCATION

Master of Science in Computer Science,

Sep 2024 - Present

Boston University, Boston

Courses: Object Oriented and Design, Graduate Algorithms, Database Management System, Distributed Systems, Applied Machine Learning, Deep Learning, Data Science

Bachelor of Technology in Computer Science and Engineering

Aug 2018 - May 2022

Vellore Institute of Technology, Chennai, India

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Varmodel AI, Austin, TX, USA

May 2024 - Aug 2024

- Automated partner intelligence workflows by integrating **Gemini API with Google Apps Script**, enabling dynamic batching, JSON parsing, and error recovery — reducing manual effort by **80%**.
- Standardized and deployed a **full-stack SaaS platform (Django, Nuxt.js, PostgreSQL, Redis)** on **DigitalOcean** using **Docker** and **CI/CD**, restoring **DB snapshots** across dev/test/prod environments – cutting environmental bugs by **30%**.
- Built scalable **integrations** with **Salesforce, HubSpot, Stripe, and LinkedIn OAuth** using a **Django REST backend and Vue.js frontend**, implementing OAuth2.0 authentication, webhook processing, and real-time data pipelines — automating **70%+** of manual workflows across communication, payments, and CRM sync.
- Architected** and **implemented** a production-ready **semantic search** solution for a **Django/PostgreSQL** application, integrating **Qdrant vector DB** and automating company data vectorization via **OpenAI embeddings + Django signals**; added **Redis** caching to reduce latency, boosting search relevance by **25%** and cutting average user search time by **30%**.

Software Developer, AppViewX Pvt. Ltd, India

Feb 2022 - June 2024

- Implemented a user-friendly interface using **Python** supporting **CRUD** functionalities of **Nginx devices**, empowering teams to effortlessly manage over **1,500 unique upstream configurations**, which significantly improved service uptime.
- Optimized F5 load balancer profile addition in **Java (Spring Boot)**, cutting execution time by **~30%** for **10,000+ devices** via **O(n log n)** sorting + binary search and then deployed the backend services on **AWS EC2** for scalability and speed.
- Designed an end-to-end **certificate management flow** using **Python SDK and MongoDB**, simplifying selection, saving, and backend updates for **50,000+ certificates**, improving user experience for critical customers.
- Automated **Kubernetes cluster deletion workflows** using **Java (Spring Boot)** backend APIs and DB fetch logic, integrating complex **optimal cluster selection logic**; used **Ansible** for **configuration management** and deployed on **AWS EKS** for robust scalability and reliability.
- Contributed to **CI/CD pipelines (Jenkins)** and implemented **backend unit tests**, improving release quality and minimizing deployment rollbacks.

PROJECTS

- Distributed Key-Value Store (Go, Docker, GCP)** – Built a sharded, fault-tolerant key-value store with consensus protocol (**Omnipaxos**), deployed on **Google Cloud GKE**; improved retrieval speed by **50%**.
- Efficient DBMS (C++)** – Implemented **buffer pool** with **LRU eviction** and **B+ Trees & LSM Trees** for optimized insert/update/delete operations; reduced query response time by **40%**.
- E-commerce Platform (MERN, Azure, Docker)** – Developed **full-stack web app** with search, filter, pagination, Stripe payments, and admin dashboard; deployed in **Docker containers** on **Azure**.

ACHIEVEMENTS

Hackathons: [Smart India Hackathon](#), [Hackerearth](#)

Publications: [Associative classification with kNN algorithm](#)

SKILLS

Languages: Python, Java, C++, Go, JavaScript/TypeScript

Backend Frameworks: Django, Node.js, Spring Boot

Frontend Frameworks: React, Vue.js, Nuxt.js

Databases: PostgreSQL, MongoDB, MySQL, Qdrant, Redis

Cloud & DevOps: DigitalOcean, AWS, GCP, Azure, Docker, Kubernetes, Git, Jenkins, Ansible

Other: REST APIs, OAuth2.0, Distributed Systems, System Design, Unit/Integration Testing