

BISWAJIT SATAPATHY

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EDUCATION

Master of Science in Computer Science,
Boston University, Boston

Sep 2024 - Present

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
Vellore Institute of Technology, Chennai, India

Aug 2018 - May 2022

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