Biswajit Satapathy

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EDUCATION

Boston University, Masters in Computer Science, Boston, MA — **Sep 2024 – Dec 2025**
Courses: Object Oriented Design, Graduate Algorithms, DBMS, Distributed Systems, Applied ML, Deep Learning, Data Science

Vellore Institute of Technology, Bachelors in Computer Science, India — **Aug 2018 – May 2022**

PROFESSIONAL EXPERIENCE

Software Engineer Intern, Varmodel AI, Austin, TX — **May 2025 – Aug 2025**

- Automated partner intelligence workflows by integrating **Gemini-2.5** API with Google Apps Script (dynamic batching, **JSON** parsing, error recovery), reducing manual effort by **80%**.
- Built and deployed a full-stack SaaS platform (Django, Nuxt.js, PostgreSQL, Redis) on **DigitalOcean** using **Docker** and CI/CD, cutting environmental bugs by **70%**.
- Built scalable Salesforce, HubSpot, and LinkedIn OAuth integrations via **REST APIs** and webhooks, automating **70%** of manual workflows across communication, payments, and **CRM** sync.
- Architected semantic search in **Django/PostgreSQL** using **Qdrant vector DB**, **OpenAI GPT-3.5**, and **Redis** caching, improving relevance by **25%** and cutting query latency by **3s**.

Software Developer, AppViewX Pvt. Ltd, India — **Feb 2022 – Jun 2024**

- Developed Python-based UI for CRUD operations on **Nginx** devices, managing **1,500+** upstream configurations, improving service uptime.
- Optimized F5 load balancer profile addition in **Java** (Spring Boot) with O(n log n) sorting + binary search, reducing execution time by **30%** for **10,000+** devices; deployed on **AWS EC2**.
- Implemented certificate lifecycle management system using **Python**, **MongoDB**, and **AWS S3** handling **50,000+** certificates for critical customers.
- Automated **Kubernetes** cluster deletion workflow on **AWS EKS** using **Spring Boot** cluster management **microservices** and **Ansible** for scalable and reliable operations.
- Implemented a **Kafka**-based event-driven system architecture to synchronize Citrix load balancer configurations and object states across **5,000+** devices, enabling real-time updates.
- Enhanced **CI/CD** pipelines (**Jenkins**) and backend unit tests to automate load balancer deployment, improving release quality and reducing production rollbacks by **50%**.

PROJECTS

- **Distributed Key-Value Store** – Built a sharded, fault-tolerant key-value store in **Golang** with **Omnipaxos** consensus protocol and deployed on **Google Cloud (GKE/GCP)**.
- **Database Management System** – Built an efficient DBMS in **C++** with buffer pool (LRU eviction), B+ Trees, and LSM Trees, supporting **10,000+ queries/sec** with optimized reads/writes.
- **E-commerce Platform** – Built a full-stack **MERN** web app with **Stripe payments**, supporting **1,000+** concurrent users and real-time order management; deployed on **Azure**.

ACHIEVEMENTS

Hackathons	**National Winner** (1st Prize, Innovation Challenge) – Smart India Hackathon
Publications	Peer-reviewed IEEE Conference Paper – Lazy Learning kNN Classification, ViTECoN 2019

SKILLS

Languages	Python, Java, C++, Go, JavaScript/TypeScript
Backend	Node.js, Express.js, Django, Spring Boot
Frontend	React, Vue.js, Nuxt.js, Next.js
Databases	SQL (PostgreSQL, MySQL), NoSQL (MongoDB, Redis, Qdrant)
Cloud & DevOps	AWS, GCP, Azure, DigitalOcean, Kubernetes, Docker, Jenkins, Ansible, Git, JIRA