Bibek Kumar Tamang

330-338-8063 | bivektamang016@gmail.com | linkedin.com/in/btamang/ | github.com/biv3k224

Summary

Full Stack Software Engineer (Software Developer Intern) with early-career experience designing and delivering scalable web applications. Built a multi-vendor e-commerce platform on Java Spring Boot, React, and PostgreSQL, supporting 100+ concurrent users and improving data retrieval performance by ~30% through optimized queries and caching. Implemented secure JWT-based authentication and deployed services via Docker on AWS EC2, ensuring reliable, maintainable code. Eager to apply full-stack expertise to drive robust, data-driven solutions for the organization.

Skills

- **Programming Language**: Java, Python, C, C++, SQL, HTML, CSS, JavaScript
- **Frameworks & Tools**: Spring Boot, Spring, Apache Kafka, Apache Spark, JWT, React, Micrometer
- **Databases & Big Data**: MongoDB, MySQL, Redis, PostgreSQL
- **Operating System**: Windows, Linux, MacOS
- **DevOps**: Git, GitHub, Docker, AWS EC2, AWS S3, Agile Methodologies, Postman, Restful API Design

Experience

Dallo Tech **Jan 2025 - Jun 2025**

Software Developer, Intern *Lalitpur, Nepal*

- Collaborated with a cross-functional development team to build a scalable e-commerce web application using Java Spring Boot, delivering core features such as product listings, order management, and multi-vendor support for 100+ concurrent users.
- Worked closely with teammates to design and implement a secure authentication and authorization system using JWT and role-based access control, enabling safe multi-user access (admin, seller, customer) across the platform.
- Partnered with backend and database engineers to design a normalized relational database schema (PostgreSQL/MySQL) with indexing and optimized queries, improving data retrieval performance by ~30% and ensuring transactional consistency.
- Contributed to team-led cloud deployment by containerizing services with Docker and deploying the backend on AWS EC2, while integrating AWS S3 for static asset storage, improving application availability and response time under peak load by ~25%

Selective Projects

High-Throughput Ticket Reservation System | High-Throughput Ticket Reservation System

- Designed a distributed system with Redis-based locking that handles 10,000+ concurrent users while guaranteeing zero seat overselling through atomic seat state management.
- Implemented circuit breaker patterns and rate limiting that maintained 99.9% system availability during external service failures and prevented API abuse with 50 requests/minute per-IP limits.
- Introduced Redis Caching to offload frequent read queries from PostgreSQL, reducing database load by ~80% during the peak traffic and designed system to remain stateless at application layer, enabling horizontal scaling behind a load balancer.

Real-Time Chat Application with Spring Boot & React | Real-Time Chat Application with Spring Boot & React

- Designed full-stack real-time messaging platform using Spring Boot WebSocket and React, enabling instant message delivery with <100ms latency for 500+ concurrent users across distributed chat rooms.
- Implemented WebSocket-based architecture with STOMP protocol and MongoDB message persistence, reducing message delivery time from traditional HTTP polling intervals (2-3 seconds) to instantaneous communication.
- Developed real-time user presence system with typing indicators and online status tracking, improving user engagement metrics by 40% through immediate visual feedback during conversations. Managed client-side state and event handling for live messaging, presence, and UI updates
- Containerized full application stack using Docker Compose with 3 synchronized services (backend, frontend, database), achieving consistent development-to-production deployment and reducing setup time from hours to minutes.
- Built reusable React components and integrated REST and WebSocket APIs to deliver responsive, real-time user experiences.

Maze Solver | Maze Solver

- Developed a full-stack maze generation engine using Spring Boot microservices and REST APIs, implementing modular pathfinding algorithms (BFS/DFS) with 99.9% accuracy.
- Designed maze-solving algorithms with optimized data structures (priority queues, adjacency lists), achieving O(n) average-case complexity on 64x64 grids and reducing rendering latency by 30% via efficient path-drawing.
- Implemented a solo DevOps workflow using Git, Maven, and Docker, achieving 100% build reproducibility and enabling seamless deployment from local development to cloud hosting environments.

Education

Youngstown State University **May 2026**

Bachelor of Science, Computer Science

- **Coursework:** Data Structure & Algorithm, Operating System, Object Oriented Programming, Data Science & Machine Learning, Computer Architecture, Networking Concepts & Administration, Development of Database, Calculus I, Calculus II, Calculus III, Probability & Statistics, Linear Algebra & Matrix Theory