BHAVINI AWASTHI

Bachelor of Technology
in Computer Science and Engineering
Birla Institute of Technology, Mesra, Ranchi

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Summary

Computer Science undergraduate with a backend and systems focus, specializing in Java, data structures, and concurrency. Experienced in building scalable components such as caches, schedulers, and RESTful services with emphasis on performance and correctness. Seeking software engineering internship roles in production environments.

Education

Degree	Institute	Board/University	CGPA/Percentage	Year
B.Tech CSE	Birla Institute of Technology, Mesra, Ranchi	BIT Mesra	9.52 (Till 5th Sem)	2023–2027
Senior Secondary	B.N.S.D. Shiksha Niketan I.C. Kanpur, UP	UP Board	91.4%	2023
Matriculation	B.N.S.D. Shiksha Niketan I.C. Kanpur, UP	UP Board	93%	2021

Experience

- **VaultofCodes** *Jul 2024 – Aug 2024*
  Java Programming Intern Remote
  – Developed modular Java applications using object-oriented principles, emphasizing clean and maintainable code.
  – Debugged and optimized logic-heavy programs, analyzing requirements and validating solutions before submission.

Projects

- **API-Based Task Management & Rate-Limited Backend Service** *2025*
  Java, Spring Boot, REST APIs, JUnit, In-Memory Data Structures, Git, Linux **GitHub**
  – Built RESTful APIs for task CRUD operations with validation, error handling, and proper HTTP status management.
  – Integrated in-memory rate limiting and wrote unit tests with JUnit to ensure correctness, reliability, and edge-case coverage.
- **Scalable In-Memory Cache & Rate Limiter** *2025*
  Java, Data Structures, Concurrency, HashMap, Doubly Linked List, Multithreading **GitHub**
  – Implemented a thread-safe LRU cache with O(1) operations using HashMap and Doubly Linked List.
  – Designed a token-bucket rate limiter to control request throughput under concurrent load.
- **Distributed Task Scheduler** *2025*
  Java, Multithreading, Priority Queues, Concurrency, Scheduling Algorithms **GitHub**
  – Built a priority-based task scheduler supporting multi-worker execution using multithreading and priority queues.
  – Simulated retries and failure scenarios to improve fault tolerance, throughput, and scheduling fairness.
- **RESTful API Management System** *2025*
  Java, REST APIs, SQL, JSON, Layered Architecture, Git **GitHub**
  – Designed and implemented REST APIs with separation of controller, service, and persistence layers under SDLC principles.
  – Managed JSON-based request–response workflows with SQL-backed storage, focusing on scalability and maintainability.
- **Ride Matching & Dynamic Pricing System** *2025*
  Java, Algorithms, Greedy Strategy, System Design Fundamentals **GitHub**
  – Designed a ride-matching engine using greedy algorithms to optimize allocation and minimize user wait time.
  – Implemented demand–supply based dynamic pricing logic to simulate real-world ride-hailing system behavior.

Technical Skills

- **Programming Languages & CS**: Java, C, Python | DSA, OOP, DBMS, OS, CN
- **Backend & Practices**: REST APIs, Concurrency, SDLC | 100+ DSA problems (LeetCode)
- **Tools & Platforms**: Git, IntelliJ, VS Code, Linux, Windows

Key Courses Taken

- **Core CS**: DSA, OOP, OS, DBMS, CN, Software Engineering, Computer Organization & Architecture, DAA, AIML, NLP, Data Mining, FLAT, Compiler Design, Digital System Design, Data Communication, Cryptography & Network Security

Certifications

- **Software Engineering Virtual Internship** – HackerRank
- **Foundational C#** – Microsoft & freeCodeCamp
- **Introduction to Generative AI** – Google Cloud

Positions of Responsibility

- **Content Writing & Finance Head**, DIVYA Club & IGNITE Club, BIT Mesra *2025 – 2026*
- **Event Management Lead**, Technical & Cultural Fests, BIT Mesra *2024 – 2025*
- **Captain**, College-Level Girls Volleyball Team *2024 – 2025*

Achievements

- **G.P. Birla Scholarship Recipient (3x)**, Academic Excellence *2022 – 2025*
- **NTSE Qualified**, National Level *2020*
- **Inter-College Sports Champion**, Basketball & Volleyball *2023 – 2025*