Bhuvanesh Kishor Kolhe

Buffalo, NY | +1-(716)-910-2215 | bkolhe@buffalo.edu | linkedin.com/in/bhuvaneshkolhe

Summary

Software Developer with 3+ years of experience in backend engineering, AI/ML, and system-level programming. Proficient in C++, Python, and Java, with a proven record of building scalable systems that enhanced performance by 20%. Delivered impactful projects like Taco-DB, a high-performance mini-RDBMS, and PintOS, an operating system kernel with advanced scheduling and memory management..

Education

University at Buffalo, The State University of New York — **December 2024**
Master of Science in Computer Science — ***GPA: 3.6/4.0***

University of Mumbai — **June 2023**
B.E. in Computer Engineering — ***GPA: 9.17/10.0***

Skills

Programming Languages and Frameworks: C, C++, JAVA, PYTHON, Node.js, React, HTML/CSS, JavaScript, SQL, NoSQL.
Key Expertise: Object-Oriented Programming (OOP), Distributed Systems, Algorithms, Data Structures.
Development Tools & Platforms: Google Cloud, Docker, AWS, Terraform, GitHub, Visual Studio, JetBrains IDEs, Jupyter Notebook.

Experience

LTIMindtree | *Software Development Intern, Remote* — February 2023 - May 2023

- **Integrated backend Java applications**, enhancing **system functionality** and **reducing customer response time by 20%**.
- Collaborated with cross-functional teams to debug **5+** critical issues and handle **engineering escalations for live environments.**
- Generated **3+ comprehensive documents** for **CI/CD pipeline integration** and scalable project handoffs.

Texity Technology | *Backend Engineering Intern, Pune, Maharashtra* — September 2022 - December 2022

- Engineered and delivered a **responsive GUI for Android apps using Android Studio**, improving **user engagement by 40%**.
- Implemented and managed **RESTful Spring APIs** handling over **50,000 daily transaction requests**.
- Resolved **50+ critical bugs during testing**, enhancing **system reliability and ensuring smooth product launch**.

SkillVertex | *Web Development Intern, Remote* — December 2021 - January 2022

- Enhanced **5 interactive and responsive web projects** using **HTML, CSS, and JavaScript**, optimizing **performance** and **accessibility**.
- Ensured compliance with **WCAG (Web Content Accessibility Guidelines)** to improve usability for diverse user groups
- Conducted thorough testing for **responsiveness** and **performance** across different devices and platforms.

Projects

Taco-DB: A Mini Relational Database Management System

- **Constructed a mini-RDBMS in C++**, implementing **POSIX-compliant file storage**, a **buffer pool manager**, and efficient **page-based data layout**.
- Built a B-Tree index for fast lookups and optimized join algorithms, reducing query execution time by **20%**.
- Designed a query optimizer prototype capable of handling **10+ complex multi-table queries** simultaneously.

PintOS: Operating System Kernel Development

- **Developed key operating system components** including **thread scheduling**, **synchronization primitives**, and **priority scheduling**.
- Implemented a **virtual memory manager** with **paging and swapping mechanisms** supporting **100+ concurrent processes**.
- Architected and refined **file system operations**, enabling **multi-level directories** and concurrent access, while ensuring data consistency and reliability.

Multi-Client Text Chat Application (C++ on Linux)

- Created a scalable **distributed** text chat system in C++ on **Linux**, employing **multithreading** and **socket** programming to handle high-volume **real-time** messaging.
- Enhanced system performance to **manage 500+ messages per hour with 99.9% uptime**.
- Designed advanced **error handling** protocols to mitigate delivery failures, reducing delivery failures by **30%** in edge scenarios.

Achievements

Awarded Second Runner-Up at the TIAA Hackathon for delivering innovative and impactful business solutions.
Acknowledged as a top-performing intern in the LTIMindtree Ignite Internship Program for exceptional technical and collaborative contributions.