ABHI SUPE

Software Engineer & Research Enthusiast
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LinkedIn | GitHub | Portfolio

EXPERIENCE

Inpro Corp *April 2024 – Current*
Cloud Software Development Engineer

- Developed microservices using **C# .NET** and **Azure Functions** in a cloud-native architecture, revising backend scalability and modularity by **42%**.
- Built data processing and **AI pipelines** using **Python** and **Azure Databricks** to drive real-time analytics, automate insights, and support data intensive use cases.
- Engineered **high-performance** backend components using **C++, C#, and Java,** enhancing API workflows and **NetSuite** operations by **38%**.
- Created dynamic interfaces with Lightning Web Components (LWC) and Visualforce, promoting **CRM** usability by 33%.
- Automated Salesforce processes using **Apex, Triggers, and Flows,** advancing stakeholder efficiency and delivery speed by 40%.
- Resolved critical bugs and **improved** system reliability with **Flow-based automation** and **custom alerting** to improve operational stability.
- Led architecture and rollout of a **Project Management Tool**, expanding team collaboration and throughput by **20%**.

University of Wisconsin
Software Analyst *December 2022 - December 2023*

- Identified inefficiencies in IT management processes leading to **high downtime** and cut down **productivity**. Configured and maintained Active Directory, **ADFS**, and **Okta** for secure and efficient identity and **access management**, decreasing authentication-related incidents by **15%**.
- Learned a new ticketing system and optimized service request resolution procedures, resulting in a **20% reduction** in resolution time. Boosted PC **troubleshooting** procedures and proactive helpdesk support, diminishing **downtime by 20%** and boosting productivity.

Inventive Digitizing
Software Developer *May 2020 - August 2022*

- Resolved **Linux server performance bottlenecks by 40%** leveraging **Locust (Python)** for load testing and maximizing per-core request handling for overhauled scalability.
- Programmed a **high-performance C++** application with Protocol Buffers (**ProtoBuf**) to revamp **Aerospike** database processing, increasing data encoding and transmission efficiency by 45%.
- Implemented **multithreading** and **batch execution**, accelerating high-volume data ingestion and improving **write efficiency by 50%**, while reducing latency by **35%**.
- Built an adaptive **load-balancing framework** that redistributed workloads based on **real-time system metrics**, increasing server efficiency by **30%** and minimizing downtime.

SKILLS

- **Programming & Scripting Languages:** *x86 Assembly, C, C++, C#, Java, JavaScript, Python, Go, SQL, GraphQL*
- **Frameworks & Technologies:** *.NET, Spring Boot, Spring MVC, Qt, REST, SOAP, gRPC, RESTful APIs, Microservices*
- **Databases & Cloud Platforms:** *MySQL, PostgreSQL, MongoDB, Neo4j, AWS (EC2, S3, Lambda, Redshift), Azure, Salesforce, NetSuite*
- **Software Engineering:** *Object-Oriented Thinking & Best Practices, Data Structures & Algorithms, STL, CUDA, OpenCL, High-Performance Computing, Low Latency, Linux/UNIX Operating Systems, Computer Architecture & Toolchain, Debugging, Cross-Functional Development*
- **DevOps & Automation:** *Docker, Kubernetes, Jenkins, Git, GitHub, CI/CD*
- **Data Science, Machine Learning & Generative AI:** *Pandas, NumPy, Scikit-learn, XGBoost, Random Forest, SVM, TensorFlow, Keras, PyTorch, NLTK, SpaCy, Transformers, Hugging Face, OpenAI APIs, LangChain, Matplotlib, Seaborn, Plotly, ggplot2*

EDUCATION

Master of Science in Computer Information Systems - *University of Wisconsin Parkside*
Master of Science in Computer Science - *MIT World Peace University*
Bachelor of Science in Computer Science - *University of Pune*

PROJECTS

High-Speed In-Memory Key-Value Store *(GitHub)*

- Designed a high-performance **in-memory key-value store in C++** using **custom hashing, bitwise** operations, and **XOR**-based mixing, achieving a **40% reduction** in lookup time and optimized memory usage.
- Implemented **dynamic rehashing, auto-scaling**, and a **multi-threaded architecture** with **mutex locks** and atomic operations, ensuring **O(1)** operations and safe concurrent access under heavy data loads.

Smart Invoice Categorization System for Finance Automation *(GitHub)*

- Addressed the inefficiency of manual invoice processing in a high-volume environment by designing a **.NET REST API** integrated with **Python OCR (Tesseract)** and **ML models (Random Forest)** to extract and categorize invoice line items.
- Automated over **80%** of invoice **classification**, decreasing manual data entry workload and cutting finance team processing time by **60%**.

Linux Server Performance Testing and Optimization Tool *(GitHub)*

- Engineered a high-performance **Linux server** testing tool using **C++** (**POSIX** threads) and **Python (asyncio, multiprocessing)** to evaluate system efficiency under variable workloads. Honed **CPU, memory,** and **I/O** performance through dynamic thread pooling and asynchronous task scheduling, ensuring efficient resource utilization and stable operations.
- Integrated real-time monitoring with **Prometheus** and **Grafana**, and devised an adaptive load balancer to intelligently redistribute workloads, **boosting** system efficiency by **40%** and cutting-down downtime by **30%**.