

Hrishikesh Verma

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Education:

The University Of Utah, Salt Lake City, Utah

May 2026 (Expected)

Master of Science in Computer Science, Grade point – 3.9/4

Experience:

Senior Software Engineer, Accenture Pvt. Ltd.

Nov 2023 – Jul 2024

- Redesigned the user interface with ReactJS to enhance functionality and user experience. Implemented ReduxJS for effective state management, resulting in a 30% reduction in API calls, thereby boosting system performance.
- Engineered scalable backend solutions with Spring Boot, enhancing RESTful API security and system architecture. Utilized Spring Data and Security for robust data integration, achieving a 40% increase in transaction throughput.
- Optimized resource utilization and deployment strategies using Spring Boot, Google Guice, Jenkins, and Kubernetes, integrating AWS services such as S3, DynamoDB, SQS, SNS, and EC2, enhancing system performance by over 25%.

Software Engineer, Accenture Pvt. Ltd.

Jun 2022 – Nov 2023

- Executed a Proof of Concept for Role-Based Access Control using advanced prototyping tools, Postman for API testing, and Jenkins for integration, which simplified processes, prevented modifications to 200+ files, and saved two weeks.
- Crafted advanced APIs with Java Spring Boot, integrating SingPass for user verification, and automating the registration and verification of over 1 million + users. This significantly elevated onboarding efficiency and user satisfaction.
- Revamped user interfaces by integrating advanced SCSS styling techniques and tools like Material-UI, Fluent UI, and Tailwind CSS, leading to a 30% increase in user satisfaction through enhanced aesthetics and usability.

Associate Software Engineer, Accenture Pvt. Ltd.

Feb 2021 – Jun 2022

- Created a custom form generator in ReactJS with reusable, configurable components, enabling seamless integration and flexible embedding across forms: this accelerated form creation and reduced development time by 20%.
- Formulated over 50 API integrations using Fetch and Axios, leveraging advanced state management techniques with Redux and MobX to ensure efficient data flow and consistency, enhancing system reliability and performance.
- Refactored and streamlined critical application logic, leveraging algorithms to achieve a 16x performance boost. Monitored metrics using Grafana, resolving 50+ edge cases, minimizing system latency, and improving overall application scalability.

Projects:

Motif-Based Graph Compression:

- Developed a motif-based graph compression algorithm using Python, NetworkX, and clustering to identify 486 recurring patterns in a Facebook network, achieving a 26% reduction in graph size while preserving structure.
- Built an automated pipeline that processes raw graph data, extracts MSTs, clusters 486 motifs into 50 groups, and resolves overlaps, eliminating manual effort and ensuring reproducible analysis.
- Created an interactive React + D3 dashboard with real-time motif filtering, cluster comparison, and dynamic graph exploration of 4,000+ edges, enabling easy insight and validation for researchers.

Virtual Self-Driving Car:

- Architected a self-driving AI system employing Convolutional Neural Networks (CNN) and advanced image processing techniques with OpenCV, resulting in 90% accuracy for obstacle detection across diverse environments.
- Boosting model efficiency by fine-tuning CNN architecture, refining hyperparameters like learning rates and batch sizes, and achieving a 15% improvement in prediction accuracy during extensive training and validation cycles.
- Designed and evaluated the system on custom datasets, achieving a 95% success rate in lane detection and traffic sign recognition, showcasing its capability to handle complex and varied driving environments

Sneaker Marketplace:

- Built a sneaker marketplace using React.js, Express.js, and PostgreSQL, featuring real-time inventory updates and efficient workflows. Achieved sub-200ms API response times during testing under simulated traffic of 5,000 requests per second.
- Integrated personalized search and recommendation algorithms, increasing simulated user retention rates by 25%. configured a secure payment gateway using Stripe API, processing mock transactions with a 98% success rate.

Skills:

- Programming Languages:** JavaScript, C++, Python, Java, TypeScript, C, HTML, CSS, SCSS, OOPs, Rust, Assembly.
- Frameworks & Libraries:** ReactJS, Angular, Node.js, ExpressJS, Mockery, Spring Boot, Jest, JQuery, Auth0, Webpack.
- Tools & Platforms:** Docker, Kubernetes, AWS, Azure, WebRTC, Jenkins, Git, VsCode, Unit Testing, FluentUI, MaterialUI
- Database Systems:** MongoDB, PostgreSQL, MySQL, NoSQL, DynamoDB, Mongoose, Redis, Apache Kafka.
- Machine learning:** Automation/Scripting, Data Science, GenAI, Numpy, Pandas, Socket.IO, Spark.
- Operating Systems:** Shell Scripting, Linux, Unix, File Systems, Multithreading, Virtualization, Bash Scripting.

Achievements & Certifications:

- Served as a Teaching Assistant at VTU University, India, for 7 months, resolving 700+ Advanced Data Structures and Algorithms queries, providing tailored mentorship to enhance students' conceptual clarity and analytical proficiency.
- Promoted to a DSA and Coding Bootcamp Instructor at TechHub, mentoring 100+ engineering students and delivering in-depth lessons on advanced topics like Tries, DP, Graphs, and Trees, achieving a 95% average student satisfaction rate.
- Secured 1st prize in the Verve 2018 and 2019 coding competition, the annual cultural fest at the University, outperforming 200+ participants. Participated in prestigious hackathons, including ValuePitch and UiPath Automation Hackathon.