

SHRADDHA HIRVE

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EDUCATION

Florida State University

Master of Science, Computer Science

May 2025

Relevant Coursework: Advanced Algorithms, Advanced Operating Systems, Database Systems, Software Engineering, Artificial Intelligence, Intro to Data Science, Advanced Data Science, Offensive Computer Security, Cyber Operations Fundamentals

Attended Grace Hopper Celebration Conference 2024

TECHNICAL SKILLS

Programming: C++, Python, C, SQL, JavaScript, TypeScript, Node.js, HTML, CSS, C#, Core Java, PHP, Perl

Tools: Angular, React, Django, MongoDB, GraphQL, PostgreSQL, SQLite, Docker, JIRA, Redis, Postman, Git, Agile, Linux, .NET Core

WORK EXPERIENCE

Computer Science Researcher | Florida State University

Jul 2024 - May 2025

- Developed interactive user interfaces using React and TypeScript for a cancer knowledge graph web app, enabling researchers to classify cancer mechanisms and interact seamlessly with complex cancer data, resulting in a 65% improvement in diagnostic prediction accuracy.
- Trained machine learning algorithms, including SVM and Random Forest, using Python, to implement cancer cell classification models in collaboration with a professor, facilitating identification of cancerous cells and leading to a 6x improvement in early cancer detection.
- Crafted efficient MongoDB queries to extract over 500,000 prostate cancer records, streamlining clinical data retrieval for research integration into the cancer knowledge graph, ultimately driving improved diagnostic prediction accuracy and faster research outcomes.

Graduate Teaching Assistant | Florida State University

Aug 2024 - May 2025

- Conducted Python lab sessions for 90 students, teaching advanced concepts such as decorators, functional programming tools, property decorators, hashmaps, and linked lists, fostering real-world application development and enhancing software design skills.
- Graded exams and assignments, providing timely, constructive feedback that improved students' learning outcomes by 20%.

Backend Developer | Cognizant

May 2022 - Jul 2023

- Architected and built scalable RESTful APIs using Python (Django), PostgreSQL, and AWS Lambda for an Auto Label Comparison Tool, implementing Redis caching, JWT authentication, and data validation logic to ensure accuracy and improve label integrity by 70%.
- Diagnosed and resolved data handling bugs in the label comparison pipeline by analyzing API responses and using Django Debug Toolbar and Python's logging module, ensuring HIPAA-compliant processing of over 20M label records and reducing compliance risk.
- Optimized SQL queries and stored procedures to efficiently process, validate, and reconcile large-scale label data, reducing query processing time from 120 seconds to 70 seconds, accelerating label comparison workflows, and supporting reliable downstream analyses.
- Collaborated with cross-functional teams (DevOps, QA, and Product) to implement CI/CD pipelines via GitLab CI and infrastructure-as-code using Terraform; decreased deployment time by 50% and enabled safer rollbacks via automated health checks.

Software Engineer | Sonora Software Pvt Ltd

Mar 2020 - Mar 2022

- Implemented Python (Django) APIs to aggregate and serve satellite anomaly data from sources like Next Launch, applying Redis caching and optimizing data retrieval logic to enable faster, more reliable access to critical information while reducing external API calls by 60%.
- Enhanced modular UI components using Angular and TypeScript, transforming complex satellite anomaly datasets into intuitive dashboards and visualizations, resulting in a 4x increase in data analysis efficiency and improved user engagement.
- Led Agile development within the Software Development Life Cycle, mentored junior developers, and improved delivery clarity through structured documentation, overseeing deployments to production environments, and reducing production bugs by 120+ incidents per quarter.

Software Developer Trainee | Financial Software & Systems Pvt. Ltd

Apr 2019 - Jul 2019

- Constructed efficient SQL queries with joins, subqueries, and indexes in PostgreSQL to extract and reconcile over 10,000 financial transaction records from multiple sources, reducing query execution time from 90 seconds to 60 seconds and improving reconciliation speed.

Software Test Engineer | SoftTech Engineers Ltd

Nov 2017 - Apr 2018

- Designed and executed comprehensive testing for proposal file uploads in a web-based Building Approval Management System using JIRA for bug tracking, Postman for API validation, and Selenium for end-to-end testing, improving quality assurance and cutting errors by 37%.

PROJECTS

- **InfiniBand Word Count System** | 🔄: Engineered a high-performance Global Distributed Hash Table in C++ using RDMA over InfiniBand to parallelize word counting tasks, increasing data processing performance by 5x across distributed nodes and enabling analysis.
- **Karma Framework Optimization** | 🔄: Upgraded the Karma framework in C++ by integrating an adaptive credit system for dynamic resource allocation, reducing resource contention incidents by 30% for volatile cloud workloads.