DARSHAN GOLCHHA

Madison, Wisconsin, USA +1 608-405-9563 dgolchha@wisc.edu https://www.darshangolchha.com/

EDUCATION

Bachelor of Science in Computer Science and Data Science **Expected May 2026**
University of Wisconsin-Madison · GPA : 3.9/4 (Dean's List, All Semesters)

- Relevant Coursework : Object-Oriented Programming, Data Structures and Algorithms, Database Management and SQL, Data Science Programming (Python), Data Science Modeling (R).

SKILLS

Java, Python, JavaScript, C, HTML5, CSS3, React.js**,** MySQL, MongoDB, Spring Framework, Django, Flask, Maven, Spring Security, RESTful APIs, Web Sockets, Tailwind CSS, Three.js, JPA, JWT, GCP, AWS, Git.

EXPERIENCE

Software Engineer And Machine Learning Intern May 2024 - Present
Opstree Solutions *Noida, Uttar Pradesh, India*

- Designed and executed a sophisticated **React** form that captured over 50 unique infrastructure requirements, resulting in a 30% increase in project **accuracy** and improving **user experience** across the organization.
- Wrote a robust backend using **Python** and **Django**, integrating **Google Gemini LLM** for precise infrastructure recommendations, which improved real-time updates and form submissions.
- Introduced a chat-based interface for interactive infrastructure adjustments, reducing manual input by 40% and increasing **user satisfaction** by 30%.
- Optimized code quality by combining **SonarQube** and **SonarCloud** into a comprehensive platform, deploying a Bug Frequency Server and **LLM integration** to cut critical production bugs by 40% and enhance review efficiency by 50%.
- Enhanced the CI/CD pipeline with a multi-faceted severity calculator and streamlined **SonarCloud** setup, improving issue **prioritization** by 30% and reducing manual review time by 60%.
- Built a system to fetch and analyse pull requests from **GitLab**, **GitHub,** and **Bitbucket**, simplifying multi-repository management and ensuring compatibility across major version control systems.
- Engineered an anomaly detection system using **sklearn Isolation Forest** to monitor critical metrics, improving proactive system management and identifying unusual patterns.

Software Engineer Intern June 2023 - August 2023
Nucleus Software Exports Limited *Noida, Uttar Pradesh, India*

- Developed Nucleopedia, a knowledge-based management system that centralizes work-related knowledge and training, resulting in a significant 70% reduction in onboarding time for over 1500 employees.
- Designed and implemented a network of interconnected **database** tables utilizing **MySQL** to normalize data, **enhancing data management efficiency** and retrieval speed. Achieved a remarkable 75% **reduction in latency**, **optimizing system performance** and ensuring seamless data access.
- Installed **Spring Security** and **JWT**, showcasing **problem-solving skills** by identifying and mitigating security threats, resulting in a 98% reduction in unauthorized access.
- Incorporated **JPA** repository methods to build an efficient **search engine**, improving **UX**.
- Demonstrated **adaptability** by rapidly learning and implementing **React** and **REST API** in **Java Spring**, contributing to a 60% reduction in reload time for the **web application**.

PROJECTS

AI Commit Risk Analyser *June 2024 – Present*

- Integrated **SonarQube** and **SonarCloud** for exhaustive code analysis across 29 languages, automating reviews via **LLM**, cutting critical bugs by 40%, and boosting review efficiency by 50%. Engineered a severity calculator, optimizing CI/CD pipelines, and enhancing **issue prioritization** by 30%.
- The severity calculator aggregates over a dozen metrics from **SonarQube**, assigns weighted scores, and calculates a severity index, further refined with **LLM** insights and the **Python** Bug Frequency Server.
- The Bug Frequency Server leverages a **scikit-learn ML model** to assess severity using historical data from **MySQL**, sourced from **JIRA** and **Bitbucket** Code Diffs. These inputs culminate in a master severity score reflecting the criticality of the latest commit.
- Seamlessly merged **API Data Fetcher**, **Python Django** Server, Bug Frequency, and **LLM Review** modules into a **Java** Relay Server built on **Spring REST API**, enhancing cross-functional collaboration and reducing system latency by 25%.

Infragen *June 2024 – Present*

- Defined a dynamic **React** form and a resilient backend using **Python** and **Django**, leveraging **Google Gemini LLM** for precise infrastructure recommendations.
- The form features predefined questions focused on **infrastructure design**, guiding users to identify necessary resources. Through prompt engineering, the **LLM** processes comprehensive input, delivering both **Infrastructure as Code (IaC)** and detailed design plans.
- Introduced an **interactive chat interface** for real-time **IaC** adjustments, reducing manual input by 40% and boosting user satisfaction by 30%. Enhanced **project planning** through automated High-Level Design (HLD) generation, improving design **accuracy** and reducing planning time by 35%.

More Info and other Projects at: https://www.darshangolchha.com/

ACTIVITIES

- Member, Wisconsin Robotics, Software Team, demonstrating strong **teamwork and collaboration.**
- Goal Keeper, Men's 7vs7 Soccer Team, showcasing **leadership** and **adaptability in high-pressure situations**.