

Darshan Golchha

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EDUCATION

Bachelor of Science in Computer Science and Data Science

Expected May 2026

University of Wisconsin-Madison • GPA: 3.8/4 (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), Web Development, Machine Learning.

SKILLS

Programming Languages: Java, Python, JavaScript, C, SQL, R.

Web Development: HTML5, CSS3, JavaScript, React, Spring Boot, Django, Flask, Maven, Spring Security, REST API.

Database Management: MySQL, MongoDB.

Cloud Computing: Google Cloud Platform (GCP), Amazon Web Services (AWS).

Machine Learning: TensorFlow, scikit-learn.

Other Technologies: Docker, Web Sockets, Tailwind CSS, Three.js, JPA, JWT, AWS S3, Git.

Operating Systems: Unix (MacOS), Linux(Ubuntu).

EXPERIENCE

Software Engineer and Machine Learning Intern

Opstree Solutions, Noida, Uttar Pradesh, India

May 2024 – August 2024

- Designed and executed a sophisticated **React** form that captured over 50 unique infrastructure requirements, increasing project **accuracy** by 30% and improving user experience. 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 analyze 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

Nucleus Software Exports Limited, Noida, Uttar Pradesh, India

May 2023 – August 2023

- 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** by getting the employee records efficiently.
- Demonstrated **adaptability** by rapidly learning and implementing **React** and **REST API** in **Java Spring**, contributing to a 60% reduction in loading time for the **web application**.

PROJECTS

AI Commit Risk Analyzer

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%.

Conversia

December 2023 - Present

- Engineered an innovative social chat platform connecting users globally, aligning with their interests and promoting cross-cultural dialogues.
- Leveraged **Web Sockets** to achieve a 40% reduction in message delivery latency, ensuring real-time communication and improving user engagement by 25%.
- **Architected** a robust backend using **Java Spring** with **REST API**, providing a 30% faster response time and enhancing the overall user experience.
- Optimized data storage and retrieval processes with **MongoDB** for user info and chat history, paired with **AWS S3** for seamless media file management, supporting more than 100 concurrent users for now.

3D Portfolio

June 2024

- Developed a cutting-edge portfolio website using **React** and **Three.js**, attracting 20% more client inquiries and showcasing a 15% increase in user interaction through immersive **3D experiences**.
- Implemented **complex 3D animations** with precise control over axis positions, rotation angles, and zoom, simulating a plane's global journey to different portfolio sections, enhancing visual appeal by 50%.
- Styled the frontend with **Tailwind CSS** and **HTML**, creating responsive, visually compelling components that improved site load time by 20%.

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

ACADEMIC ACHIEVEMENTS

- Earned the prestigious Scholastic Excellence Awards in 2016 and 2019, **consistently delivering outstanding results** during multiple periods: **2013-2015, 2016-2018**.
- Received the Scholar Badge for academic **excellence**, May 2021.
- Dean's List Academic Honor for Fall 2022, Spring 2023 and Fall 2023, showcasing **consistency** and **commitment** to excellence.

CERTIFICATIONS

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning by Coursera

- Learned best practices for using TensorFlow, a popular open-source machine learning framework in **Python**.
- Built a basic neural network in TensorFlow.
- Trained a neural network for a computer vision application.
- Learned how to use convolutions to improve your neural network.

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**.