Dhruv Sharma

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INTRODUCTION

Aspiring software engineer with experience in full-stack development, security, and AI applications. I'm passionate about building impactful solutions with a strong focus on user experience, performance, and security.

EXPERIENCE

Full-Stack Developer   Aug 2024 – Feb 2025

StuCo (Social Platform for Student Consultation)   *Singapore*

- Developed a platform to connect high school students with U.S. college students from similar backgrounds, facilitating mentorship and providing personalised college application advice
- Built the frontend using React and Tailwind CSS, enhancing user experience with intuitive design and real-time responsiveness
- Developed backend with Node.js, Express and MongoDB, creating API endpoints to handle HTTP requests for seamless communication between frontend and backend
- Implemented real-time chat functionality between users using Socket.IO, enabling instant and seamless communication within the platform
- Conducted thorough API endpoint testing using Postman to ensure robust and secure data integration
- Fixed security vulnerabilities, such as potential Cross-Site Scripting (XSS) attacks and improper input sanitisation, ensuring a secure platform for users

PROJECTS

Personalised Book Recommender | *SvelteKit, TypeScript, Machine Learning*   Feb 2025 – Present

- Developing an AI-powered book recommendation platform that suggests books based on a user's reading history
- Implementing a machine learning-based recommendation engine using collaborative filtering and content-based filtering techniques
- Designing an intuitive user interface using SvelteKit for a smooth user experience
- Storing user book history in cookies to simplify development while focusing on recommendation logic

San Graha - Orbital 2024 (Artemis) | *Godot, Git, GitHub, GitHub Actions, Docker*   May 2024 – Aug 2024

- Developed and launched a real-time strategy game from scratch using the Godot engine, demonstrating rapid adaptability to new tools and environments. Successfully integrated CI/CD pipelines, ensuring continuous delivery every two weeks
- Led a team of 2 developers using Agile methodologies, delivering bi-weekly sprints and conducting 100+ unit tests, resulting in a reduction in code bugs post-deployment while ensuring efficient team workflow and version control using Git across the project
- Applied industry-standard design principles (e.g., SOLID, Law of Demeter) to increase code flexibility and maintainability, facilitating easier feature updates and scalability

Posture Detection Program | *Python, Mediapipe, Raspberry Pi*   May 2023 - Aug 2023

- Developed a posture detection application utilising computer vision and AI techniques via Mediapipe, providing real-time feedback to users during workouts and flagging improper posture
- Integrated machine learning models to analyse movement patterns, improving workout safety and efficiency for 20+ users during beta testing

SKILLS

Languages & Frameworks: Java, Python, C/C++, SQL, JavaScript, React, Node.js, GodotScript
Developer Tools: Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib, Mediapipe
Spoken Languages: English (Fluent), Hindi (Fluent), Urdu (Fluent), Spanish (Elementary)

EDUCATION

National University of Singapore & NUS-College   Singapore

Bachelor of Computing in Computer Science (Honours), Minor in Philosophy, NUS-College   *Aug. 2023 – May 2027*