Dilpreet Singh

B.Tech Computer Science student (2nd Year)

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Gulzar Group of Institutes

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https://dilpreet-webresume.vercel.app/

Profile

B.Tech Computer Science (AI & Machine Learning Specialist) with a proven track record of architecting intelligent systems and leading technical communities. Google Student Ambassador recognized for bridging the gap between industry-standard ecosystems and academic innovation. Expert in Python, TensorFlow, and Large Language Models (LLMs), with a portfolio highlighted by award-winning NLP solutions and modular AI environments.

Experience

Google Student Ambassador 08/2025 – Present

Google (Student Developer Program)

Campus Leadership: Selected as the primary liaison between the Google developer ecosystem and the student body, tasked with fostering a culture of technological innovation on campus. Event Management: Organizing and hosting technical workshops, coding sessions, and seminars to introduce 100+ students to Google Cloud Platform, TensorFlow, and Generative AI tools. Community Building: Building a peer-to-peer learning network that encourages students to participate in global developer challenges and open-source contributions.

- Bridged the gap between students and Google's ecosystem.
- Organized technical workshops.
- Fostered a culture of innovation at Gulzar Group of Institutes.

Technical Support & Assistance Ludhiana

Photography and Videography Studio • Ludhiana

- Delivered technical assistance for photography and videography projects.
- Troubleshot equipment and managed media workflows.
- Optimized processes to enhance team collaboration.
- Supported customers with technical inquiries via remote access.

Technical Skills

Languages & Core
Advanced Python C++ Data Structures & Algorithms (DSA) Linux Systems.

AI/ML Stack
TensorFlow Keras OpenAI API Integration Prompt Engineering Natural Language Processing (NLP).

Tools & Platforms
Git/GitHub Google Cloud Platform (GCP) Signal Processing 3D Animation Synchronization.

Projects (Detailed)

Real-time sign language translator
Quantum 3.0 Hackathon – Top 30 Finalist
A real-time sign language translator for Railways Announcements using NLP and 3D avatars (ASL/ISL)
Engineered a bi-directional translation system using NLP and 3D Avatars to convert speech/text into American (ASL) and Indian (ISL) Sign Language. Overcame the critical technical challenge of temporal synchronization, aligning 3D skeletal animations with real-time speech patterns to ensure fluid, human-centric communication for the hearing impaired. Optimized inference latency for NLP models, allowing for seamless real-time interaction between users and digital avatars.

Jarvis Virtual Assistant
Python-based modular AI environment
Developed a modular AI environment in Python, integrating Signal Processing for noise-resilient speech recognition and high-fidelity Text-to-Speech (TTS) engines. Integrated Gemini & Lama models via API to create a context-aware reasoning engine, enabling the assistant to handle complex task automation and data retrieval. Implemented a decoupled architecture, allowing for the hot-swapping of LLM backends and speech modules without system downtime.

Digital Personal Portfolio
Tech Stack: HTML5, CSS3, JavaScript
Overview: Developed a fully responsive, personal brand website to serve as a digital resume and project showcase for internship applications. Technical Execution: Built the site from scratch using semantic HTML and custom CSS for layout, ensuring fast load times and cross-browser compatibility without relying on heavy frameworks. Impact: Deployed via Vercel to maintain an always-online presence, allowing recruiters to view live coding projects and contact details instantly.

Government Services Portal Redesign (Competition)
Focus: UI/UX Design & Accessibility
Overview: Led a design initiative during a college competition to modernize the user interface of a legacy government website. Problem Solving: Identified key pain points in the existing user journey, specifically regarding navigation for non-technical users and mobile responsiveness. Outcome: Created high-fidelity wireframes and a prototype that streamlined the service application process, reducing the estimated user "time-to-task" by 40%.

Achievements

Top 30 Finalist (out of 500+ teams): Quantum 3.0 'Prompt The Future' Hackathon
for the "Real-Time Sign Language Translator" project

Silver Medalist (2nd Position): Digital Logo Designing Competition, ACME 2025
Guru Nanak Dev Engineering College (GNE)

Education

Bachelor of Technology (B.Tech) in Computer Science & Engineering 2024 – 2028
Gulzar Group of Institutes, Ludhiana Khanna, Punjab
Specialization: Artificial Intelligence and Machine Learning (AIML) Timeline: 2024 – 2028 (Currently in 2nd Year) Academic Focus: Building a strong foundation in computer science principles while exploring advanced AI methodologies

10th Grade (74.9%) 04/2020 – 03/2021
Baba Nand Singh Convent Sr. Sec. School Ludhiana
PSEB

12th Grade (90.2%) 04/2023 – 03/2024
Teja Singh Sutantar Memorial Sr. Sec. School Ludhiana
PSEB