Gunbir Walia

Contact Details:

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Professional Summary:

A conscientious and inquisitive student with a strong passion for leveraging technology to solve complex challenges. I have a deep curiosity for software engineering and artificial intelligence, supported by hands-on experience in machine learning, natural language processing and LLM-driven applications. Known for my ability to innovate, collaborate effectively, and deliver impactful results.

Technical Knowledge:

Java | Python | Kotlin | C# | JavaScript | CSS | HTML | SQL | Unity | Blender | Figma | ANTLR | Machine Learning | Computer Vision | Natural Language Processing | Evolutionary Genetic Algorithms | Artificial Neural Networks | Agentic AI | Retrieval-Augmented Generation | Vector Search | MATLAB | MS Office

Work Experience:

Erasmith Technologies, A.I. Intern, Delhi-NCR, India (June 2025 – Present)
Working on the design and development of an agentic AI system for intelligent contract analysis and automated document generation, combining Retrieval-Augmented Generation, dynamic templates, and local LLMs to enable secure and scalable business automation.

Education:

University of Sussex, Brighton, United Kingdom (2023 – 2027) (Ongoing)
B.Sc. (Hons) in Computer Science and Artificial Intelligence

Key modules: Data Structure and Algorithms | Applied Machine Learning | Data Science | Software Engineering | Acquired Intelligence & Adaptive Behaviour | Databases with SQL | Compilers and Computer Architecture | Program Analysis | Human Cognition | Introduction and Further Programming
Grade so far: 1st class Honours (81% overall average)

Scottish High International School, Gurgaon, India (2016 – 2023)

Indian School Certificate (Class XII) Examinations
Core subjects: Computer Science | Maths | Physics | Chemistry | English
Overall Result: 85 %

Indian Certificate of Secondary Education (Class X) Examinations
Core Subjects: Computer Applications | Maths | Sciences | Social Sciences | English | French (Including a Diploma in French Language issued by the French Ministry of Education – DELF A1)
Overall Result: 96 %

Projects:

Evolutionary Braitenberg behaviour
- Developed Braitenberg vehicles to show intelligent behaviour in a simulated environment, using a microbial genetic algorithm in Python.
- Transferred evolved behaviour to a robot, analysing challenges in simulation to realty transfer.
- Explored key embodied AI concepts including active perception and sensory-motor coupling.

Face Alignment
- Developed a machine learning model to carry out face alignment and study computer vision.
- Pre-processed images to standardise input, improve data quality and reduce noise.
- Implemented a cascaded ridge regression model with SIFT-based local feature extraction to accurately predict facial landmarks in images.

Spam Detection

- Developed a machine learning model to conduct spam detection.
- Pre-processed the text data and implemented TF-IDF feature extraction on the corpus.
- Applied Naïve Bayes and Logistic Regression models to predict spam messages.
- Achieved an accuracy rate of 96% and 98% respectively with the two models.

Property Tycoon

- Designed and developed an online multi-player board game, similar to Monopoly, using Unity with C# in a small group as part of a Software Engineering module.
- Created and rendered 3D assets in Blender and used Figma to design various UI elements.
- Managed project documentation and coordinated tasks for each sprint in the team.
- Worked under an Agile development methodology with successive sprint cycles, intended to help us become more accustomed to the way projects are developed in the real-world and gain valuable adaptability and problem-solving experience along the way.

ANTLR interpreter

- Designed an interpreter for a simple programming language using ANTLR.
- Defined the language syntax using context-free grammar and then generated a parser.
- Built parse trees from code input and performed semantic analysis to validate correctness.
- Implemented execution of valid code and appropriate error messaging for invalid code.

SQL Database

- Created a music management database with MySQL while taking Harvard's CS50 course.
- Designed a relational schema while ensuring referential integrity and optimized the structure for scalable and organized data storage, akin to the kind of databases you would find in the backend of music streaming platforms like Spotify or Apple Music.

Productivity App

- Designed and implemented a mobile productivity app to keep track of the amount of time you spend studying and doing extra-curricular activities as part of my university's hackathon.
- Created wireframes and UI/UX in Figma and implemented functionality using FlutterFlow.

Extracurricular Experience:

Global Design Challenge, Team Leader (January 2024)

- Participated in an educational programme in partnership with Engineers Without Borders UK.
- Led a team in designing a renewable energy solution for a Cambodian village, using circular economy principles.
- Gained valuable leadership and interpersonal skills through project management.

SHISTECH, Organising Committee (2021 - 2023)

- Effectuated my school's inaugural technology symposium which was conceptualised with an ambitious vision of creating an event that fosters talent in the fields of STEM.
- Organised the overall structure and designed several innovative events that became key highlights of the programme.
- Taught me the value of collaboration and effective communication in achieving ambitious goals.

Professional Certifications/Self-Development Courses attended:

- HarvardX's CS50 Introduction to Databases with SQL
- Oracle Cloud Infrastructure Generative AI Professional
- Oracle Cloud Infrastructure Data Science Professional
- Oracle Fusion AI Agent Studio

Voluntary Community Work:

Worked with the SIMBI Foundation to provide educational support to students in remote and refugee communities by recording audiobooks and uploading them onto SIMBI's platform.