

MANPREET SINGH

Artificial Intelligence &
Machine Learning Engineer

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EDUCATION

Bachelors in Computer Science Engineering with Specialization in Artificial Intelligence and Machine Learning (Hons.) | Chandigarh University, Gharuan

- Graduation: June 2024 | **8.59 CGPA**

Intermediate (CBSE) | Shishu Niketan Model Senior Secondary School, Chandigarh

- Session: 2018-2020 | **91.6%**

Matriculation (CBSE) | Saupin's School, Chandigarh

- Session: 2017-2018 | **85.4%**

TECHNICAL COMPETANCIES

- Python
- Machine Learning
- SQL
- Deep Learning
- OpenCV
- Power Bi
- Data Analysis
- Statistics
- C++

SKILLS

- Strong Leadership skills to lead and manage teams effectively.
- Excellent written and verbal communication skills.
- Experience in analyzing and interpreting large datasets to identify trends, solve complex problems, and develop data-driven solutions.
- Impressive problem solving skills to identify problems and implement the best solutions

CERTIFICATIONS

- Azure AI-900
- Machine Learning Specialization by Stanford University
- Certificate of merit in Programming in C++ from IIT Bombay (Silver)
- Deep Learning Specialization by DeepLearning.AI
- National Level Qualifier in NASA Space App Challenge'22.

PROFILE

AI engineer with a solid foundation in machine learning development and six months of professional experience. Proven ability to leverage Python, TensorFlow, and data analysis to tackle complex real world problems.

PROJECTS

SMART WHEELCHAIR

05/2023

- Developed a mobile application with voice and button controls using MIT App Inventor to remotely manage a hardware prototype with a range of 10 meters.
- The prototype utilizes an ESP32 microcontroller and two 360° servo motors, enabling precise control over function.

SIGN LANGUAGE TRANSLATOR

05/2022

- Developed a sign language recognition system achieving an accuracy of 89% on a dataset of 1800+ labeled signs, enabling real-time conversion of signs to text on screen
- Utilized Google's Mediapipe framework and Long Short-Term Memory (LSTM) deep learning architecture for real-time functionality.
- Project selected for presentation at a prestigious Corporate Advisory Board (CAB) Meeting, attended by more than 110 industry leaders, demonstrating its potential impact in healthcare sector.
- Authored a research paper published in the esteemed ICTACTS-2023 conference, contributing to the advancement of sign language recognition technology

PROFESSIONAL EXPERIENCE

Binomial Technologies Pvt. Ltd

Artificial Intelligence Intern

01/2024 - Present

- Reduced missed object detections to 0%** by implementing real-time object detection systems utilizing cutting-edge techniques like YOLO and TensorFlow Object Detection API (TFOD).
- Curated and preprocessed a diverse dataset exceeding 7000 images** (RGB and thermal) using CVAT software to facilitate model training for accurate object detection.
- Leveraged expertise in TensorFlow, PyTorch, and OpenCV to optimize object detection model accuracy, achieving a significant **improvement of 55%% to 85%..**

PUBLICATIONS

Research Paper **"Real Time Hand Sign Language Recognition using Depp Learning: A Robust and Efficient Model for Improved Communication Accessibility"** Published at International Conference on Technological Advancements in Computational Sciences (ICTACS) -2023