# Harshit

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▶ Portfolio



#### EDUCATION

#### **National Institute of Technology**

Bachelors of Technology in Electrical Engineering

2021 – present Kurukshetra, India

2019 - 2021Sirsa

D. A. V. Centenary Public School, Sirsa

Higher Secondary School



# **TECHNICAL SKILLS**

# **Programming Languages**

c, c++, javascript, python, MATLAB Simulink, HTML, CSS, SQL

#### **Data Structure and Algorithms in C++**

#### **AutoCad**

Autodesk Fusion 360

#### libraries

Numpy, Pandas, TensorFlow, Keras, OpenAi Gym, matplotlib, OpenCv, Mediapipe, PyAutoGUI, scikitlearn, Seaborn

#### **Developer Tools**

Visual Studio Code, Jupyter Noteboook, PyCharm ,Google Coolab



### **PROJECTS**

#### Sign Language Detection using ACTION RECOGNITION ∅

- Extract **MediaPipe Holistic Keypoints** with the help of mediapipe library.
- Build a Sign Language model using a Action Detection powered by LSTM layers (Tensorflow and Keras to build a deep neural network that leverages LSTM layers to handle the sequence of keypoints.)
- Predict sign language in real time using video sequences in OpenCV

#### Facial Recognition App with Tensorflow and Kivy ⊘

- Build a deep facial recognition application to authenticate into an application.
- A model using Deep Learning with Tensorflow which replicates what is shown in the paper titled **Siamese** Neural Networks for One-shot Image Recognition.
- Once that's all trained then integrate it into a **Kivy app** and actually authenticate!

#### **Real Estate Price Prediction website** $\mathscr{D}$

- A model using sklearn and linear regression using banglore home prices dataset from kaggle.com.
- Python flask server that uses the saved model to serve http requests.
- Website built in **html**, css and javascript that allows user to enter home square ft area, bedrooms etc and it will call python flask server to retrieve the predicted price.
- Data science concepts such as data load and cleaning, outlier detection and removal, feature engineering, dimensionality reduction, gridsearchev for hyperparameter tunning, k fold cross validation etc.

#### Al Virtual Painter &

- Track our hand and get its landmarks using mediapipe library MediaPipe Hand Landmarker task lets you detect the landmarks of the hands in an image and then use the points to draw on the screen.
- Two fingers for selection and one finger for **drawing in real-time**.

### **LANGUAGES**

English | Hindi | Punjabi



#### **INTERESTS**

Reinforcement Learing, Computer Vision, Robotics, Artificial Intelligence, ML

# Played Vijay Merchant Trophy (U16 National level tournament) for Haryana Cricket Association

- Selected as a left hand bowling and right hand batting blowing all-rounder

# Highest Wicket Taker as a medium fast bowler in U14 state Tournament

Haryana Cricket Association | BCCI

### 2nd runner up in Haryana State level Cricket Tournament

Government of Haryana

- Played as a main opening bowler for the team

# Badged Bronze medal in Men's Wushu at District Level Tournament | Haryana

Khelo india youth games

#### Winner at U14 District Basketball Tournament

Haryana Basketball Association

- Played as power forward in the team



# **ORGANIZATIONS**

### Embedded System and Robotics Club (EMR) | NIT Kurukshetra ⊘

2022 - present

- Volunteered in EMR bot workshop in which we delivered Information about making and working of the line follower and remote controlled bot .
- Attended **DIP** ( **Digital Image Processing** ) workshop organised by EMR in which we learned about OpenCV, numpy, python etc, and made a Gesture control video **player** project.



# COURSES

# Machine Learning Specialization - Stanford | DeepLearning .AI

by Andrew Ng

- Supervised Machine Learning: Regression and Classification
- Advanced Learning Algorithms
- Unsupervised Learning, Recommenders, Reinforcement Learning

#### The Complete Python Bootcamp From Zero to Hero in Python - Udemy

by Jose Portilla

#### **Offline/ University Courses**

NIT Kurukshetra

- Basic of programming
- Modeling and Simulation
- Differential and Integral Calculus
- Control System
- Matrix Algebra

Kurukshetra, India