

# Davinder Singh

ELECTRICAL ENGINEERING UNDERGRADUATE · OPEN-SOURCE ENTHUSIAST

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## Education

### Indian Institute of Technology Roorkee

Roorkee, India

B.TECH. IN ELECTRICAL ENGINEERING

Aug 2019 - PRESENT

- Cumulative Grade Point, CGPA: 7.44/10

### Ch. Harpal Singh Convent Senior Secondary School

Sirsa, India

12TH - INTERMEDIATE (CLASS XII)

Mar 2019

- Percentage: 85.80%

### Satluj Public School (CBSE)

Sirsa, India

10TH - MATRICULATE (CLASS X)

Mar 2017

- Cumulative Grade Point, CGPA: 9.8/10

## Achievements & Scholarships

2019 All India Rank 1616

India

2019 All India Rank 3566

India

## Projects

### Malware Detection and Classification

IIT Roorkee

ELECTRICAL ENGINEERING DEPARTMENT (AML TERM PROJECT)

Apr 2022 - May 2022

- Converted Clustered CSV Dataset into single CSV with 20% of 'Benign' which is sample compare to initial distribution.
- Performed EDA on the dataset, performed feature extraction using one special custom correlation which is 'Kendall' and does analysis by using 20 feature of dataset starting with 85 features.
- Compared performance of 4 model GridSearchCV, LogisticRegression, BaggingClassifier, DummyClassifier along with their hyperparameter tuning, and achieved micro-averaged over all for Bagging Classifier = 0.249 and 0.111 for Logistic Regression. I have also implemented a deep neural network algo for this also.
- This is course project in the subject of Applied Machine Learning.

### Stock Price Prediction using LSTM-GRU

IIT Roorkee

ELECTRICAL ENGINEERING DEPARTMENT (IOP PROJECT)

Mar 2022 - Apr 2022

- Performed EDA on the dataset, performed feature extraction and does analysis by using four feature of dataset and those are High, Low, Open and Close.
- Model with 3 layers of LSTM stacked over GRU with window width of model is 40.
- Compared performance of 4 algorithms XGBoost, LSTM and LSTM-GRU along with their hyperparameter tuning, achieving the best accuracy of 98.94% overall.
- This is course project in the subject of Industry Oriented Problem.

### Solana Voyage [github.com/8Bit1Byte/flutter-app-solana-voyage](https://github.com/8Bit1Byte/flutter-app-solana-voyage)

IIT Roorkee

BUILDING OUT LOUD (HACKATHON POWERED BY SOLANA)

Aug 2021 - Sep 2021

- Solana Voyage is Dapps made by me for submission in this competition.
- Some of the features of this app are:
  - Just in single click people get their account and can make a transaction via links and pop notification at destination devices.
  - User just create a wallet or use his or her wallet and Pay and Request crypto coin or can add crypto into wallet. offers based on specific condition, previous transaction history, monthly report, we can see real-time market

information and trading services.

- Along with App create I made my own small Solana API RPC calls in dart for better integrations in flutter framework based Dapps.

## Forward Kinematics of a 2-link Manipulator using KSOM

IIT Roorkee

ELECTRICAL ENGINEERING DEPARTMENT (ANN TERM PROJECT)

Nov 2021 - Dec 2021

- Direct implement forward kinematics result and model generated kinematics result compared and tries to optimize the model to reduce the error.
- Extending this model to implement line tracking and circle tracking and finally custom path tracking within range of links.
- This is course project in the subject of Artificial Neural Networks.

## Design of Solar assisted E-Rikshaw (with Regenerative Braking)

IIT Roorkee

ELECTRICAL ENGINEERING DEPARTMENT

Dec 2020 - Feb 2021

- Design a solar assisted e-rickshaw for 6 people with an average weight of 70kg and weight of the e-rickshaw is 100kg.
- The project involved the use of regenerative braking to reduce the waste of power while applying brakes.
- The design used one-fourth of the power of the power from solar charging and the rest by electrical charging.
- This is a course project in the subject of Engineering Analysis and Design.

## Air Quality Index

IIT Roorkee

CIVIL ENGINEERING DEPARTMENT

Sep 2019 - Oct 2019

- Comprehensive analysis and explanation of air quality index.
- Calculation process and monitoring of AQI levels.
- This is a course project in the subject Environmental Science.

## Extracurricular Activity

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**StackOverflow** [stackoverflow.com/users/14867730/exploore-x](https://stackoverflow.com/users/14867730/exploore-x)

IIT Roorkee

CONTRIBUTOR

Mar 2021 - May 2021

- My Contribution on stackoverflow is about 3 months.
- Main area which I cover here are Machine Learning, Python, Numpy, Pandas, Matplotlib, Tensorflow, Keras, Flutter, Mobile Development.
- Within 3 months I scored about 1620 reputations and 0.01% top in python and 0.08% top flutter but it is dynamic.

## NCC IIT Roorkee

IIT Roorkee

VOLUNTEER

Sep 2019 - Sep 2020

- As an NSS volunteer, I actively participated in the NSS activities.
- I help the advisory committee of the college with the proper execution of the NSS activities.
- It helps us in developing qualities of leadership, skills to become an organizer.

## Skills

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**Programming** Proficient: C/C++, Node.js; Experienced: Python, Dart, JavaScript

**Framework** TensorFlow, Keras, PyTorch, Scikit Learn, Flutter Firebase, React JS, React Native

**Web** (Basic) Express.js with Node.js and React JS

**Utilities** Git, Docker, Vim, VS Code, Anaconda, Colab, Jupyter Notebook

## Certificates

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Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning

*Coursera*

Deep Learning Specialization

*Coursera*

Google Ads Search Certification

*Google Skillshop*

Workshop of APIs 101 using Postman

*Cognizance'22*

## Interests

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- Data structures and algorithms
- Machine Learning
- Mobile Development