

# DHRUV JAIN

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*AI Technophile with passion for Coding*

## EDUCATION

<b>Indian Institute of Technology, Dharwad (IITDH)</b>	2018 – 2022
Bachelor of Technology in Department of Electrical Engineering.	CGPA: 8.87/10
<b>Pace Junior Science College, Mumbai</b>	2016 - 2018
High School, Stream: Science, (Optional: Computer Science).	Score: 83.69%
<b>HVB Global Academy, Mumbai</b>	2003 - 2016
School, (Optional: Computer Science).	Score: 93.17%

## CAREER OBJECTIVE

To work for an organization that provides me the opportunity to practice and improve my skills and knowledge to grow along with the organization's objective for a developing community.

## TECHNICAL STRENGTHS

<b>Programming Languages:</b>	Python2/3, MATLAB, PHP, GIT, C/C++, Java, MySQL, HTML, CSS, Shell, LaTeX, JavaScript, AJAX, Visual Basics, Docker.
<b>Modeling and Analysis:</b>	Artificial Intelligence: ML/DL, OpenCV, Speech Language Processing, Cloud Hosting and Management: AWS/GCP/AZURE/Shared-Hosting, Google Colab, Flask, Laragon, GitHub, VS Code, Linux, MS Office.

## WORK EXPERIENCE

### EXAWIZARDS INDIA LLP (August 2021 – April 2022)

*AI Engineer Intern*

- Semantic Segmentation of Multispectral Images Using Deep Learning. The task is to build a segmentation model for anomaly object detection, compatible with Polarized NIR+RGB Images. A significant portion of the study investigates mmdetection and mmsegmentation functionalities from the OPEN-MMLAB toolbox.

### GLOBALSHALA and SAINT LOUIS UNIVERSITY (June 2021 - August 2021)

*Data Analyst Intern*

- Campaign Continuity Recommender. GlobalShala has been running several ads campaigns on Facebook for the SuperHero U Event. The task was to recommend the company to discontinue at-least one campaign to improve the cost-to-effectiveness ratio of the movement as a whole and provide valid arguments for the suggestions.

### BHARAT ELECTRONICS LIMITED (BEL) and IITDH (Jan 2021 - June 2021)

*Data Scientist Intern*

- Online Multi-Target Tracking Using Recurrent Neural Networks. The task was to achieve better accuracy than the existing state-of-the-art, the Interacting Multiple Model (IMM) filter, alongside providing probabilistic predictions and smoothing the objects' trajectories in radar vicinity using DL techniques.

### MILESTONE BUSINESS VENTURES LLP (MBVL), Mumbai (May 2019 - August 2019)

*Backend Developer Intern*

- This internship helped me develop my technical skills and helped me understand various non-technical aspects such as quantity estimation, labor management, and safety precautions. Also, developed and hosted a showcase website for this manufacturer to display its products online.

## RESEARCH AND DEVELOPMENT

### Deep Learning based Radar Multi Target Tracking (August 2021 – December 2021)

- Outperformed the existing state of the art, Interacting Multiple Model (IMM) filter by deep-learning techniques, in-order to predict, associate, and smoothen out the objects' trajectories in radar vicinity, with a sound accuracy.

## PROJECTS

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### **Real-Time Speech Recognition System, IITDH** (August 2021 – December 2021) ([Link to Code](#)).

*AI Developer*

Implemented real-time end-to-end speech recognition system on hardware. Alongside, integrating a microphone, ADC and FPGA, and speakers through few pre-trained TCN/TDNN deep learning models.

### **Bosch Traffic Sign Recognition, IITG** (February 2021 - March 2021) ([Link to Code](#)).

*Data Scientist*

A step closer to L5 autonomy, we tried to solve a challenging problem that will help a vehicle make its own decisions by recognizing the traffic signals on the road, using BOSCH's dataset on Resnet models.

### **Smart India Hackathon, Kerala** (June 2020 - August 2020) ([Link to Code](#)).

*Data Engineer*

Developed an Asset Performance Monitoring platform based on ML algorithms to calculate the maximum real-time reliability and efficiency of the process plant equipment such as motors, for the company GAIL.

### **Door Unlock System, IITDH** (March 2018 - April 2018) ([Link to Code](#)).

*Software Engineer*

Building a Face-Detection Door Unlock system. Implemented various aspects such as face detection using pre-trained haar-cascades, image processing using OpenCV. Learned to work with raspberry-pi devices.

## Minor/Course Projects

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### **Machine Learning IPL 2020 Winner Predictor** ([Link to Code](#)).

ML model to predict the winner of IPL 2020, using Kaggle data of 2009-2020 matches (80%+ Accuracy).

### **Chess Keywords Voice Detection** ([Link to Code](#)).

Understand spoken chess commands and converts it to chess notation, to make a move in the Chess GUI.

### **Visualizing optimization algorithms and their convexity** ([Link to Code](#)).

Checking for convexity of fn.'s by visualizing them in 3D interactive plots; for solving convex problems.

### **Data Filtering and Data Visualization** ([Link to Code](#)).

Transforming and understanding relations in data using Heat-maps, visualizing tool of python-cufflinks.

### **Maze Solver Bot** ([Link to Code](#)).

Using Arduino with ultra-sonic sensors to help bot to escape a maze, using right side wall technique.

## Relevant Courses Completed

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| • Data structures and Algorithms           | • Data Analysis                              |
| • Programming Techniques                   | • Computer Programming                       |
| • Pattern Recognition and Machine Learning | • Introduction to High Performance Computing |
| • Neural Networks and Deep Learning        | • Calculus and Linear Algebra                |
| • Speech Processing                        | • Introduction to Probability                |
| • Optimization Theory and Algorithms       | • Introduction to Communication Systems      |
| • Information Theory                       | • Digital Signal Processing                  |
| • Computer Architecture                    | • Digital Systems                            |

## ACADEMIC ADDONS

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- Participated in 9th Inter IIT Tech Meet, IITG (2021) and Building Out Loud Hackathon, Devfolio (2021).
- Campus Ambassador of Smartknower Program (2021).
- Runners up in Machine learning Competition organized by Smart India Hackathon (2020).
- Won Coding Competition in Indian Institute of Information Technology, Dharwad (2019).
- Secured AIR 7514 in JEE Advanced among 2,000,000 students in open general category (2018).

## PERSONAL TRAITS

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- I can understand five languages: English, Hindi, Marwari, Gujarati, Marathi.
- Member of: Department Academic Mentorship Program Team, AI Club, Quiz Club, Tech Team, HPC Team.
- young CS Enthusiast that has the ability to work as an individual as well as in a group.
- Believes in Openness, Conscientiousness, Extraversion, and Agreeableness.
- Strong motivational, management, and leadership skills in any assigned task.
- Interested in Sports: Cricket, Football, Badminton, Basketball, Swimming, Athletics, Chess and many more.
- Taking various courses on Coursera and Udemy Platform regarding AI, Python, Web Development.
  - Introduction to HTML5
  - Building Web Applications in PHP
  - Introduction to Structured Query Language
  - Building Database Applications in PHP
  - JavaScript, jQuery, and JSON
  - Machine Learning A-Z™
  - Deep Learning A-Z™
  - Python for Data Science Bootcamp
  - Git Beginner
  - Python Django 2021