

# Parul

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## Education

### Monash University, Clayton

PHD IN COMPUTER VISION

- Title: **Application of Diffusion Models in limited supervision learning**

*Victoria, Australia*

*Feb 2022-December 2023*

### Indian Institute of Technology Ropar

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

- CGPA: **9.21/10**

*Punjab, India*

*July 2016-June 2020*

### Central Board of Secondary Education

D.A.V. PUBLIC SCHOOL, SECTOR-3, KURUKSHETRA

- AISSCE (Class 12): **95%**
- AISSE (Class 10): **10/10**

*Haryana, India*

## Skills

### Programming Languages

Python, C, C++, Javascript, SQL, PHP, HTML, .Net Core, C#

### Frameworks / Libraries

PyTorch, TensorFlow, OpenCV

### Softwares / Tools / OS

Matlab,  $\text{\LaTeX}$ , Git, Linux(Ubuntu)

## Internships/Projects

### Nasdaq Chrome Extension

*Bangalore, India*

NASDAQ INC.

*June - August 2021*

- Developed a chrome extension for users to be able to search and keep track of upto 6 favorite stocks, get the latest news headlines and see a snapshot of the market in real time.
- Additionally, user's behaviour is tracked with the help of Google Analytics to keep track of trending stocks and news articles.
- Aimed towards increasing the traffic to Nasdaq website.

### Other mini-projects

*Bangalore, India*

NASDAQ INC.

*July 2020 - Jan 2022*

- Creating a dotnet hosted service to inculcate Google Analytics API based Trending Articles/Stocks To Nasdaq.com.
- On the backend, created new SQL DB jobs for data feeds from new vendors.
- On the UI side, worked towards improving the performance metrics of Nasdaq webpages by reducing Cumulative Layout Shift.

### Article Sentiment Analyzer

*Bangalore, India*

NASDAQ INC.

*June - July 2019*

- Articles present on Nasdaq's official website will go through this sentiment analyzer to make sure that they aren't inappropriate for either its own or its listed companies' image.
- Calculating Nasdaq-specific sentiment on top of the results of Google's NLP API.
- Building a PHP API for backend and the user interface in the form of a browser extension.

### Zero Shot Object Detection

*Ropar, India*

WITH DR. ABHINAV DHALL

*Jan - May 2019*

- Exploring state-of-the-art Object Detection models and modifying their architecture to make them suitable for Zero Shot Object Detection.
- Making a new ZS-YOLO model out of the YOLO model by adding separate Object localization and Semantic prediction layers to get the confidence prediction.
- The Average Precision achieved on PASCAL-VOC Dataset was better than that in the work followed because of the extra trainable layer introduced at the end.

### Android Emulator

*Delhi, India*

UNDER DR. SMRUTI RANJAN SARANGI, ASSOCIATE PROFESSOR, IIT DELHI

*May - July 2018*

- Extracted instruction level execution traces from Google's Android Emulator and ran them on an architectural simulator - Tejas ARM.
- Created a generic graph library for the Tejas simulation system using matplotlib package of python.

## Relevant Courses

- **Computer Science:** Advanced Computer Vision, Artificial Intelligence, Machine Learning, Digital Image Analysis, Operating Systems, Algorithm Design and Analysis, Data Structures, Database Application Programming, Computer Architecture
- **Mathematics:** Discrete Mathematics, Linear Algebra, Real Analysis

## Academic Achievements

- Recipient of **Merit Scholarship** for outstanding performance (top 7% students) in the first year at the institute.

- Secured an **All India Rank(AIR)** of **1509 (Top 0.007%)** in JEE Advanced-2016 (Conducted by IITs).
- Received scholarship for clearing **National Talent Search Examination**-2012 conducted by National Council of Educational Research and Training.
- Secured **All India Rank 179** in 2013 and **All India Rank 112** in 2014 in National level Science Talent Search Examination conducted by Unified Council.
- Got All India Rank 1 in the Sanskrit Pratiyogita organized by the D.A.V. College Managing Committee in 2011.

## Extra-Curricular Activities

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- Served as a member of Enactus, IIT Ropar in the projects **Sakshar** and **Prabhas**.
- Participated in the Inter IIT Cultural Meet 2017 (Group Dance).