

Parth Goyal

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Education

Indian Institute of Technology Ropar

B.TECH. IN COMPUTER SCIENCE AND ENGINEERING

CURRENT C.G.P.A : **8.39/10**

Ropar, India

August 2017 - Present

Central Board of Secondary Education

AISSCE (CLASS 12 PCM): **95.7%**

AISSE (CLASS 10) C.G.P.A : **10**

Hisar, India

Skills

Programming Languages C/C++ (Primary Language), Python, Javascript

Frameworks / Libraries TensorFlow, Keras

Softwares / Tools / OS Git, Linux(Ubuntu), Windows

Projects

Indian Coins Detection and Instance Segmentation using MASK R-CNN

TensorFlow, Keras

- Detects masks and predicts class for each instance of coin in the image and draws bounding boxes along with it
- Used the **ResNet-FPN-101** and **Region-Proposal-Network (RPN)** architecture for instance segmenting coin images into all different types of coins
- Converted masks to bounding boxes and manual annotation of images along with masks
- Made the whole dataset with all the varieties of coins and **Masked** all images using VGG Annotator

RISC-V Assembly Code Simulation

Javascript, Lexer, Python

- Converted Assembly code (RISC-V) to Machine code using Lexical Analysis
- Handled .data variables and .text variables and stored them in Memory after conversion
- Build classes such as CPU, System, Register, Registry Access, Main Memory and Control for simulation of the Machine Code

Neural Style Transfer

TensorFlow

- Implemented the Neural Style Transfer Algorithm created by Gatys et al. **A Neural Algorithm for Artistic Style**
- Generated the Style Matrix, to calculate the content and style costs and produce the style weights

Spam Message Filter

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- Developed a program which classifies text/email messages as spam and not spam
- Used **Levenshtein distance** for measuring distance between strings
- Implemented **K-Means Clustering Algorithm**

Amacon - an Ecommerce Startup

Java, JUnit Test Suite

- Build an Ecommerce startup similar to Amazon mainly involving three entities: Database, Administrator and Customer
- Assigning ID to each new customer and making a database of their cart items
- Using Exception Handling Techniques and JUnit Test Suite make sure that system does not crash

Flutter Projects

Flutter, Dart

- Easy List App for keeping records of favorite items and managing them
- A Unit Conversion App for translation of different units

Relevant Courses

Computer Science Deep Learning Specialization (Coursera), Data Structures, Computer Architecture, *Operating Systems, *Database, *ADA

Mathematics Calculus, Linear Algebra, Discrete Mathematics, Differential Equations, Probability

Positions of Responsibility

Branch Representative

June 2018 - Present

Represented my CS batch 2017 and acted as a bridge between students and academic staff.

Smart India Hackathon (SIH) Mentor

February 2019 - March 2019

Been the mentor of 2018 CSE batch's team for SIH, working on a Android Application (AGRIZONE) for Agriculture and Rural Development.

Miscellaneous

JEE Rank Secured a rank of **1027** (Out of **1.5 million candidates**) in Joint Entrance Exam, 2017.

Institute Merit Scholarship **100%** merit scholarship offered by the Institute for getting a rank under 1500.

GeeksForGeeks Institute Rank 1 with over 300+ problems solved on the practice platform of GeeksForGeeks.

Pehchaan-ek-Safar (NGO) Taught kids belonging to poor background as a part of NSS activity.

Roshni App for Blind People Worked along with a PhD student to detect various Indian currency notes. Made dataset from scratch.

BAJA-SAE India Volunteer Volunteered in the BAJA-SAE India event held in IIT Ropar in March 2018 and appointed as 1st Year Head.