

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

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

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

Hisar, India

Skills

Programming Languages C/C++ (Primary Language), Python, NodeJS, HTML, CSS

Frameworks / Libraries TensorFlow, Keras, Android Studio, Flutter

Softwares / Tools / OS Git, Linux(Ubuntu)

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 along with ROI Classifier & Bounding Box Regressor for segmentation
- Converted masks to bounding boxes and manually annotated images using **VGG Annotator**

Leave Management Portal

NodeJS, MongoDB, MySQL, HTML

- Individual Profile Portals for each faculty and special portals for cross-faculty for leave management
- Different leave routes for different level of faculty

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**

Other Projects

Flutter, Dart | Raspberry Pie

- Easy List App for keeping records of favorite items and managing them using Flutter
- Image to OCR to Speech using TTS engines for blind people on Raspberry Pie

Relevant Courses

Computer Science

Deep Learning Specialization (Coursera), Data Structures, Computer Architecture, Programming Languages and Pragmatics, Operating Systems, Database Systems, Analysis and Design of Algorithms, Computer Vision

Mathematics

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

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

I was the mentor of 2k18 CSE batch's team that went for **Grand Finale** of 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.

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.