

# Partha Sarathi Purkayastha

Room 2110, Shankar Bhawan – BITS Pilani – Pilani, India  
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Third year undergraduate at BITS Pilani pursuing a major in Computer Science and Engineering (Hons.), applying for the position of Research Assistant in Computer Science.

## Education

<b>Bachelor of Engineering(Hons.)</b>	9.86/10.0
Computer Science and Engineering, BITS Pilani	2020-24
<b>All India Senior School Certificate Examination (Class XII)</b>	97.20%
South Point School, Guwahati (CBSE)	2019
<b>All India Secondary School Examination (Class X)</b>	10.0/10.0
South Point School, Guwahati (CBSE)	2017

## Key Courses Taken

### Computer Science

Data Structures and Algorithms, Database Systems, Object Oriented Programming, Computer Programming, Logic in Computer Science, Discrete Structures in Computer Science, Microprocessors and Interfacing, Digital Design

### Mathematics & Other Courses

Linear Algebra, Probability and Statistics, Calculus, Differential Equations, General Biology, Principles of Economics, Techniques in Social Research, Technical Report Writing

## Additional Courses Undertaken

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning by **DeepLearning.AI**, AI for Medical Diagnosis by **DeepLearning.AI**, Amazon ML Summer School 2022

## Scholastic Achievements

- Awarded **BITS Merit Scholarship(100%)** for being among the Top 1% of students in the year 2020
- Secured **All India Rank 3300** in JEE Advanced 2020 among **150,000** candidates
- Secured **99.7** percentile in JEE Main 2020 among **1.1 million** candidates
- Secured **All India Rank 6040** in NEET 2020 among **1.36 million** candidates
- Secured **403/450** marks in BITSAT 2020
- Secured **Rank 1** in Assam CEE 2020

## Technical Strengths

- **Programming Languages:** C/C++, Python, Java
- **Development:** HTML, CSS, Node JS, React JS, MySQL, Scikit, Numpy
- **Others:**  $\text{\LaTeX}$ , Git, GitHub, Postman

## Work Experience

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### Object Detection Model

Guide: Nikhil Singh, Jio Platforms Ltd.

May 2022- Jul 2022

- Created a **bounding box dataset** by downloading google images in single shot and automated the process of data selection
- Used **numpy, matplotlib and colab\_utils** libraries
- Used Roboflow for the Annotation process and to export in the required format.

## Key Academic Projects

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### Object Detection Model

Guide: Nikhil Singh, Jio Platforms Ltd.

Jun 2022- Jul 2022

- Trained an Object Detection Model based on the latest model **Yolov7** within a confidence of **35%**.
- Used **sklearn, numpy, tensorflow, PIL and matplotlib** libraries.
- Model could detect relevant objects with a confidence of **80+ %**.

### DNS Visualizer

Guide: Dr. Amit Dua, Computer Science Department, BITS Pilani

Mar 2022- Apr 2022

- Developed a **full-stack website** for the visualization of the **DNSSEC** authentication chain
- Implemented using a **relational SQL database**
- Server side and Client side developed using **Node JS** and **React JS** respectively.

### Fake News Detection Model

Guide: Dr. Tanu Shukla, Department of Humanities & Social Sciences, BITS Pilani

Oct 2021-Jan 2021

- Trained **Bi-LSTM, LSTM and Ensemble Learning** Models to detect fake news
- Used **Accuracy, F1-score, Precision, Recall, and Specificity** to compare performances
- Achieved **90+ %** using Memory-based models on all parameters

## Extra-Curricular Activities

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### Publicity-Coordinator

North-East Cultural Association: **Arunodoi**

Feb 2022-Apr 2022

Video-editor for promotion of the cultural groups belonging to the Association, and also represented the Association on Founders' Days 2022 Event at BITS Pilani.

### Student Volunteer

Indian Red Cross Society

Mar 2022

Volunteered for the execution of a two-day long Blood Donation Camp with a footfall of 3000+ and 800+ Blood Donations.

### Teaching Assistant

Youngenius Eduventure Pvt Ltd

Nov 2020- Feb 2021

Prepared materials to help students for JEE Mains/JEE Advanced/NEET in the subjects of Physics, Chemistry and Mathematics.

## Languages Known

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English, Hindi, Malayalam, Bengali