# Pratyush Das

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- *GitHub*  https://github.com/reikdas

## Education

**Institute of Engineering and Management, Kolkata**  2017-2021(Expected)
*Bachelor of Technology in Computer Science and Engineering*
SGPA: 8.62/10

**Don Bosco School, Park Circus**  2002-2016
*Council for the Indian School Certificate Examinations*

## Experience

**Fermi National Accelerator Laboratory**  June, 2019 - September, 2019
Mentor - Jim Pivarski(Princeton University)
*IRIS-HEP Fellow; Visiting Scientist at the LHC Physics Centre as a part of the CMS Collaboration*
- uproot - ROOT IO Software in Python which streams all data as numpy arrays
  - Added functionality to write ROOT files with TTrees.

  June, 2018 - September, 2018

*DIANA-HEP Fellow; Visiting Scientist at the LHC Physics Centre as a part of the CMS Collaboration*
- uproot -
  - Examined ROOT serialization of objects.
  - Added functionality to write ROOT files with strings and histograms.

**DIANA-HEP**  June, 2017 - August, 2017
Mentor - Jim Pivarski(Princeton University), Viktor Khristenko(CERN)
*Summer Student(Worked from home)*
- spark-root - Apache Spark datasource for ROOT
  - Separated spark bindings from TTree reading code
- root4j - ROOT library in Java
  - Optimized codebase to facilitate interoperability

## Workshops and Summer Schools

**CoDaS-HEP**  2019
*Princeton University*

**Fast Machine Learning**  2019
*Fermi National Accelerator Laboratory*

## Programming Skills

| **Experienced** | **Libraries/Frameworks** |
| --- | --- |
| - *Python* | - *numpy* • *ROOT* • *git* |
| **Familiar** | |
| - *Java* • *C* • *Go* | |

## Publications

- N.Saha, **P.Das**, H.N.Saha, "Authorship Attribution of Short Texts using a Multi Layer Perceptron", International Journal of Applied Pattern Recognition, 2018 Vol. 5 No. 3, Pages 251-259, DOI: 10.1504/IJAPR.2018.10016100.  2018

## Presentations

- Writing files with uproot
  - *PyHEP (Abington, UK)*  2019
- Writing TTrees with uproot
  - *IRIS-HEP Topical Meeting: Summer student project presentations(Vidyo)*  2019
- Writing files with uproot
  - *ROOT Users' Workshop (Academy of Sciences and Arts of Bosnia and Herzegovina)*  2018
  - *DIANA Meeting: Updates on ROOT I/O(Vidyo)*  2018
- Separation of Concerns - Refactoring code between ROOT4J and Spark-Root
  - *DIANA Meeting: Student Projects(Vidyo); CMS Big Data Science Projects(Vidyo)*  2017

## Achievements

- Accepted to attend PLMW and POPL conferences with full scholarship.  2019
- Awarded the IRIS-HEP undergraduate fellowship.  2019

- Awarded the DIANA-HEP undergaduate felowship. 2018
- International Rated Chess Player (Federation Internationale des Echecs) 2016
- Adhyayan Student Leadership Contest(Adhyayan India) - Third 2015
- IT Quiz (Computer Society of India) - Second 2014