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

Programming Skills

Experienced
- *Python*

Familiar
- *Java* • *C* • *Go* • *C++* • *SML*

Libraries/Frameworks
- *numpy* • *ROOT* • *git*

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

- Python in High Energy Physics
    - *Scipy India (Indian Institute of Technology, Bombay)*   2019
- The Scikit-HEP Project: Overview and Prospects - Eduardo Rodrigues et al.
    - *24th International Conference on Computing in High Energy and Nuclear Physics (University of Adelaide)*   2019
- 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

- Selected to attend PLMW 2020 and POPL 2020 conferences with full scholarship.   2019
- Awarded the IRIS-HEP undergraduate fellowship.   2019
- Awarded the DIANA-HEP undergaduate felowship.   2018
- Adhyayan Student Leadership Contest(Adhyayan India) - Third   2015