

# Pratyush Das

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## Education

<b>Institute of Engineering and Management, Kolkata</b> <i>Bachelor of Technology in Computer Science and Engineering</i> SGPA: 8.62/10	2017-2021(Expected)
<b>Don Bosco School, Park Circus</b> <i>Council for the Indian School Certificate Examinations</i>	2002-2016

## Experience

<b>Fermi National Accelerator Laboratory</b> Mentor - Dr. Jim Pivarski(Princeton University) <i>IRIS-HEP Fellow; Visiting Scientist at the LHC Physics Centre as a part of the CMS Collaboration</i> <ul style="list-style-type: none"><li>• uproot - ROOT IO Software in Python which streams all data as numpy arrays<ul style="list-style-type: none"><li>- Added functionality to write ROOT files with TTrees.</li></ul></li></ul>	June, 2019 - September, 2019
<i>DIANA-HEP Fellow; Visiting Scientist at the LHC Physics Centre as a part of the CMS Collaboration</i> <ul style="list-style-type: none"><li>• uproot -<ul style="list-style-type: none"><li>- Examined ROOT serialization of objects.</li><li>- Added functionality to write ROOT files with strings and histograms.</li></ul></li></ul>	June, 2018 - September, 2018
<b>DIANA-HEP</b> Mentor - Dr. Jim Pivarski(Princeton University), Dr. Viktor Khristenko(CERN) <i>Summer Student(Worked from home)</i> <ul style="list-style-type: none"><li>• spark-root - Apache Spark datasource for ROOT<ul style="list-style-type: none"><li>- Separated spark bindings from TTree reading code</li></ul></li><li>• root4j - ROOT library in Java<ul style="list-style-type: none"><li>- Optimized codebase to facilitate interoperability</li></ul></li></ul>	June, 2017 - August, 2017

## Summer Schools

<b>Computational and Data Science for High Energy Physics</b> <i>Princeton University</i>	2019
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## Programming Skills

<b>Experienced</b> <ul style="list-style-type: none"><li>• <i>Python</i></li></ul> <b>Familiar</b> <ul style="list-style-type: none"><li>• <i>Java • C • Go • C++ • SML</i></li></ul>	<b>Libraries/Frameworks</b> <ul style="list-style-type: none"><li>• <i>numpy • ROOT • git • CUDA • *nix • L<sup>A</sup>T<sub>E</sub>X</i></li></ul>
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## Publications

• N.Saha, <b>P.Das</b> , 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
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## Presentations

• Python in High Energy Physics - <i>Scipy India (Indian Institute of Technology, Bombay)</i>	2019
• The Scikit-HEP Project: Overview and Prospects - Eduardo Rodrigues et al. - <i>24th International Conference on Computing in High Energy and Nuclear Physics (University of Adelaide)</i>	2019
• Writing files with uproot - <i>PyHEP (Abington, UK)</i>	2019
• Writing TTrees with uproot - <i>IRIS-HEP Topical Meeting: Summer student project presentations(Vidyo)</i>	2019
• Writing files with uproot - <i>ROOT Users' Workshop (Academy of Sciences and Arts of Bosnia and Herzegovina)</i>	2018
- <i>DIANA Meeting: Updates on ROOT I/O(Vidyo)</i>	2018
• Separation of Concerns - Refactoring code between ROOT4J and Spark-Root - <i>DIANA Meeting: Student Projects(Vidyo); CMS Big Data Science Projects(Vidyo)</i>	2017

## Achievements

• Awarded travel grant to speak at PyCon USA 2020.	2020
• Awarded travel grant to attend PLMW and POPL 2020.	2019
• Awarded the IRIS-HEP undergraduate fellowship.	2019
• Awarded the DIANA-HEP undergraduate fellowship.	2018