

# Sayandip SARKAR

## PERSONAL DATA

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PLACE AND DATE OF BIRTH: Howrah, West Bengal, India | 27 September 1996  
ADDRESS: Sri Arabinda Road, Bakshi Bagan, Santragachhi, Howrah-711104,  
West Bengal, India  
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## WORK EXPERIENCE

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| <i>Current</i><br>MAY 2017 | <p>Undergraduate Research Assistant at DREAM LAB, CDS, IISC, Bengaluru<br/><i>Storage of Temporal Property Graphs</i><br/>Advisor: Professor Yogesh SIMMHAN<br/>Working on a framework that stores temporal property graphs, with any schema whatsoever, as parquet files. The framework known by the acronym <b>HIPPO</b>(Hierarchy Filter Project Partition Ordering) provides a way to quickly convert any graph storage format to parquet files in order to run fast queries on them.</p>               |
| DEC-FEB 2017               | <p>Undergraduate Research Intern at CASL, CSA, IISC, Bengaluru<br/><i>Study of the Effects of Dynamic Voltage and Frequency Scaling on Distributed and Parallel Processing Systems</i><br/>Advisor: Professor K. GOPINATH<br/>Performed an in depth study into the effects that various system level aspects such as Dynamic Voltage and Frequency Scaling, hyperthreading etc. have on the working of various distributed frameworks such as Hadoop. Results documented in a paper sent to HiPC, 2017.</p> |
| JULY-DEC 2016              | <p>Research Assistant at SCHOOL OF COMPUTER ENGINEERING, KIIT UNIVERSITY, Bhubaneswar<br/><i>Improving Area Coverage of Wireless Sensor Networks</i><br/>Advisor: Professor A. R. SWAIN<br/>Worked to improve the coverage area of wireless sensor networks by modeling them using Voronoi diagrams and successively merging adjacent diagrams to remove the redundant nodes, i.e make them inactive for the current duration. Implemented code for the same in Matlab.</p>                                 |

## EDUCATION

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| JUNE 2018<br>(expected) | <p>Bachelor of Technology in COMPUTER SCIENCE AND ENGINEERING,<br/><b>KIIT University</b>, Bhubaneswar<br/>GPA: 8.23/10(major gpa till 6<sup>th</sup> semester)</p>                    |
| MAY 2014                | <p>INDIAN SCHOOL CERTIFICATE(ISC), <b>M. C. Keriwal Vidyapeeth</b>, Howrah<br/>PERCENTAGE: 93%(Physics, Chemistry, Computer Science, Mathematics, English)</p>                         |
| MAY 2012                | <p>INDIAN CERTIFICATE FOR SECONDARY EDUCATION(ICSE),<b>M. C. Kejriwal Vidyapeeth</b>, Howrah<br/>PERCENTAGE: 94.8%(Physics, Chemistry, Computer Application, Mathematics, English)</p> |

## TECHNICAL SKILLS

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STRONGEST AREAS	Distributed Systems, Graph Processing and Storage, Data Structures, Algorithms, Object Oriented Programming, Operating Systems, Linux administration, Security, Networking, High Performance Computer Architecture
PROGRAMMING LANGUAGES	C, Java, Python, Scala, Matlab, Bash, SQL
TOOLS AND FRAMEWORKS	Hadoop(HDFS, MapReduce, YARN), Spark, Parquet, GraphLab Create, Wireshark, GitHub, Subversion

## SELECTED PROJECTS

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HIPPO	A temporal property graph storage framework written in Spark.
MINESWEEPERSERVER	A concurrent and threadsafe minesweeper server written in Java that uses a self implemented board type as the internal representation.
EXPRESSIVO	An expression parser written in Java that accepts a valid mathematical expression and then simplifies or differentiates it based on user input.
CPU SCHEDULER	A naive <i>priority queue</i> based CPU scheduler implemented in Java.
DISK SPACE	A naive implementation of the <i>Unix du</i> command in Java.
CARD HAND	A program to simulate a card hand using <code>positional lists</code> in Java.
VORONOI MERGE	A program in Matlab to merge two Voronoi diagrams using a divide and conquer algorithm.

## LANGUAGES

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BENGALI:	Mothertongue
ENGLISH:	Fluent
HINDI:	Fluent

## INTERESTS AND ACTIVITIES

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Literature(both fiction and non-fiction), Open-Source, Programming  
Paradoxes and thought experiments, Patterns in nature and human cognition  
Cricket, Tennis, Working out, Travelling