



PARTHA DHAR



ACADEMIC DETAILS

Year	Degree / Board	Institute	GPA / Marks(%)
---	B.Tech in Computer Science & Engineering	Indian Institute of Technology, Delhi	9.76
2017	AISSE, CBSE	Delhi Public School, Noida	96.2%
2015	AISSE, CBSE	Delhi Public School, Noida	10.0

SCHOLASTIC ACHIEVEMENTS

- **Department Rank: 5** in a batch of 80 students at the end of five semesters, Dept. of Computer Science & Engineering (2020)
- **Minor Degree:** Pursuing a minor in **Economics** from the Department of Humanities and Social Sciences, IIT Delhi (2018-21)
- **IIT Delhi Merit Award:** Top 7% of students in academic performance in Semesters I, II, IV and V out of 850+ students (2017-20)
- **B-83 Merit Award:** Among 13 students awarded the scholarship for a stellar academic record, funded by the batch of 1983 (2019)
- **NTSE Scholar:** Awarded the prestigious scholarship after a two-tier nationwide selection process by NCERT (2015)
- **KVPY Fellow:** All India Rank **168** in KVPY(SA) conducted by Department of Science and Technology, Govt of India (2015)
- **IOITC:** Among the 27 students invited to the training-and-selection camp for the **International Olympiad in Informatics** (2017)

INTERSHIPS

- **Rubrik, Inc. (Team Galactus):** *Shared access token management for Azure* (Apr'20 - Jul'20)
 - Created a unified interface for sharing **Azure SAS** URLs to allow multiple jobs using the same resource to run in parallel
 - Ensured utmost security by adding **encryption** using Google Cloud KMS and additional checks across various layers
 - Handled deadlocks and races at the database allowing simultaneous requests for the same token while being scalable
 - Deployed to production for all Polaris customers, resolving **1000+** taskchain failures seen each month due to timeouts
- **McGill University, Canada (Prof. Chris Barrington-Leigh):** *Development of a Python API for Stata* (May'19 - Jul'19)
 - Devised an object-oriented class design for interfacing with Stata and capturing the results in a **DataFrame** and LaTeX table
 - Added support for various common statistical models such as OLS, logistic regression and local polynomial smoothing*Received funding of CAD 7,000 as a part of the selection in the **Mitacs Globalink Research Internship** program 2019*

PROJECTS

- **PageRank using MapReduce** | Prof. Rijurekha Sen, *Parallel & Distributed Computing* (Mar'20 - Jul'20)
 - Implemented the PageRank algorithm using three different variations of MapReduce to compare performance on benchmarks
 - Achieved **3x speedup** over existing standard libraries using our custom MapReduce implementation built with **C++ MPI**
- **Secure Chat Application** | Prof. Aaditeshwar Seth, *Computer Networks* (Aug'19 - Sep'19)
 - Designed **multi-threaded** server and client implementations for communication using an HTTP-like protocol over **TCP** sockets
 - Ensured end-to-end security using **RSA** public-private key encryption and message integrity via **digital signatures**
- **Multi-Cycle ARM Processor** | Prof. Anshul Kumar, *Computer Architecture* (Jan'19 - May'19)
 - Developed a multi-cycle processor for 32-bit ARM Assembly instruction set in **VHDL** and simulated in Vivado Design Suite
 - Interfaced a 4x4 key-pad module and 7-segment display for I/O on a **BASYS3 FPGA** board using interrupts and exceptions
- **Functional Language Interpreter in OCaml** | Prof. Sanjiva Prasad, *Programming Languages* (Jan'19 - May'19)
 - Implemented type-checking, scanning, parsing, CBV and CBN semantics for boolean and big-integer expressions
 - Added support for definitions and **recursion** using SECD and Krivine machines; built front-end using OCaml-lex and yacc
- **Automation of Thermoforming Machine** | Prof. P. V. Madhusudhan Rao, *Summer Project* (May'18 - Jul'18)
 - Integrated an Arduino UNO, stepper motors and linear actuators to automate the heating and vacuum forming cycle*Awarded **DISA 2018** (Design Innovation Summer Award) for the project by the Ministry of Education (formerly MHRD)*

TECHNICAL SKILLS

- **Programming Languages:** C++, Python, Go, OCaml, Java, MATLAB, ARM Assembly, VHDL, HTML, CSS, JavaScript
- **Tools and Frameworks:** Git, MPI, MapReduce, Xilinx ISE, Vivado, ARMSim, Wireshark, Pandas, Scikit-learn, PyTorch

POSITIONS OF RESPONSIBILITY

- **Secretary, Quizzing Club** (April, 2019 - Present): *Leading a 14-member team to manage club activities and associations*
 - Formed strategic tie-ups with the **Delhi Quiz Club** and LSR QuizSoc to avail quizmasters for institute and national-level events
 - Recruited renowned quizmasters to conduct 8 different events at Rendezvous 2019 with **2000+ people** participating over 4 days

EXTRA CURRICULAR ACTIVITIES

- **Indian Youth Delegation 2018:** Part of the 200-member delegation selected by the Ministry of Youth Affairs and Sports, Govt of India, for a week-long cultural exchange with the People's Republic of **China**; visited Beijing, Wuhan and Shanghai
- **Winner, National Finals:** TCS IT Wiz 2016, India's largest inter-school IT Quiz with 15,000+ participants from 15 cities
- **Jio Coding Hackathon:** 2nd Runner-Up at Inter-IIT Tech Meet 2019; **2nd Runner-Up**, Codemod, Tryst 2019, IIT Delhi



PARTHA DHAR



IIT COURSE

Degree	Institute	CGPA
B.Tech in Computer Science & Engineering	Indian Institute of Technology, Delhi	9.76

COURSES DONE

Linear Algebra & Diffe. Equa., Calculus, Minor Design Project - Vi, Data Structures And Algorithms, Discrete Mathematical Structur, Digital Logic & System Design, Macro Economics, Probability & Stochastic Pro., Mini Project, Computer Architecture, Programming Languages, Design Practices, Signals And Systems, Microeconomics, Principles Of Artificial Int., Computer Networks, Analysis & design Of Algorithms, Fundamentals Of Language Sciences, Econometric Methods

INTERSHIPS

- Year: 2020, Company: Rubrik (US Profile), Profile: Member Technical Staff Intern

POSITIONS OF RESPONSIBILITY

- Quizzing, Club secretaries 2019-20 (April, 2019 - May, 2020)
- Technical Editor, BSP (May, 2018 - May, 2019)
- Activity Head, Literati (June, 2018 - October, 2018)
- Hostel Representative, Quizzing Club (April, 2018 - April, 2019)

EXTRA CURRICULAR ACTIVITIES

- Quizmaster, Spartech (November, 2018)
- Quizmaster, Fresher's Orientation Quiz (September, 2018)
- League Captain, League Draft (October, 2019 - March, 2020)
- Best Fresher, Satpura Hostel (June, 2018 - June, 2019)
- First Place, Gazettale (August, 2020)
- Winner, Mastermind Prelims (April, 2018)
- Winner, Mastermind Prelims (April, 2019)
- Runner-Up, Inter IIT Quizzing (December, 2018)
- 2nd Runners-Up, Inter IIT Quizzing (December, 2019 - March, 2020)
- 2nd Runner up in BHM stall, Satpura Hostel (June, 2018 - June, 2019)
- Second, Inter Hostel Dance Video Competition 2017 (October, 2017)
- Second, Inter IIT Cultural Meet Sci Tech Quiz (December, 2019 - March, 2020)
- Second, Inter IIT Cultural Meet Biz Quiz (December, 2019 - March, 2020)
- Second, Inter IIT Biz Quiz (December, 2018)
- Second, Rendezvous'18 SciTech Quiz (October, 2018)
- Second, Major General (January, 2020 - March, 2020)
- Second, Trojan Horse (October, 2019 - March, 2020)
- Second, League (August, 2018 - May, 2019)
- Second, Battle Royale (April, 2019)
- Third, Inter IIT Gen Quiz (December, 2018)
- Third, Inter IIT SciTech Quiz (December, 2018)
- Third, Rendezvous'18 General Quiz (October, 2018)
- Third, Lorem Ipsum (August, 2018)
- Third, Occam's Razor (March, 2020)