

Sagnik Chatterjee

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Current Position and Research Interests

I am a Ph.D. candidate at **IIIT Delhi**, advised by **Dr. Debajyoti Bera**. My main area of research lies at the intersection of quantum computing and learning theory.

Education

JUL '19 onwards	Indraprastha Institute of Information Technology, Delhi Doctoral Candidate (Ph.D.) in <i>Computer Science</i> (CGPA: 8.63)
AUG '17	Maulana Abul Kalam Azad University of Technology, Kolkata Bachelor of Technology in <i>Computer Science and Engineering</i> (CGPA: 8.10)

Research

OCT'22	Efficient Quantum Agnostic Improper Learning of Decision Trees Submitted. PDF available on request.
OCT'21	Quantum Boosting using Domain-Partitioning Hypotheses Presented at QTML'22. Poster presented at QIP'22 and accepted at Young Quantum'23, HRI. Pre-print at https://arxiv.org/abs/2110.12793 .
NOV'20	Applying the Quantum Alternating Operator Ansatz to the Graph Matching Problem Poster presented at QIP'21 and AQIS'20. Pre-print at https://arxiv.org/abs/2011.11918 .

Teaching Experience (Teaching Assistantship)

Winter 2023	Introduction to Quantum Computing
Summer 2022	Data Structures and Algorithms
Winter 2020, 2021	Theory of Computation
Monsoon 2020, 2021	Modern Algorithm Design

Selected Co-Curricular Activities

FEB '23	Gave an invited talk on our QTML paper at the IIIT-Delhi CSE department seminar .
MAR '22	Gave an invited talk on quantum boosting algorithms at the IIT-Delhi Theoretical CS seminar .
DEC '20	Gave an invited talk on Quantum Machine Learning at the Faculty Development program hosted by JNTU, Anantapur.
FEB '20	Selected to attend a workshop on Sensitivity, Query Complexity, Communication Complexity and Fourier Analysis of Boolean Function organized by the Indian Statistical Institute , Calcutta.
JAN '20	Received 2 nd place in the IBM Q Awards , Teach Me Quantum category. https://bit.ly/ibmqawards20
DEC '19	Selected to attend the 4th Winter School in Computer Science and Engineering (on The Mathematics of Quantum Computation) organized by the Israel Institute for Advanced Studies , at the Hebrew University of Jerusalem.

Selected Extra-Curricular Activities

- AUG '22 | Organizer and coordinator for Ketchup talks, at IIIT Delhi. <https://twitter.com/KetchupIIITD>.
- DEC '21 | Only grad student to be part of the organizing committee for QISE'21 workshop (co-located with FSTTCS). <https://acm-goa.github.io/QISE/>.

Industry Experience

NOV '18 to MAR '19	Oracle Financial Services Software Limited Staff Consultant: Developed data models and automated report generation during EOD operations. Bank successfully went live in December 2018.
SEP '17 to OCT '18 <i>Technology Stack</i>	Associate Consultant: Customized the business logic of our core product FCUBS. FLEXCUBE, BI-Publisher, JAVA, JSP, Weblogic, JS, SOAP, Spring, Hibernate, Oracle 12c, SQL.
FEB '17 to MAY '17 <i>Technology Stack</i>	Infosys Limited Systems Engineering Intern (Full Stack Developer): Agile methodology. JAVA, Weblogic, Angular, REST, Spring, Hibernate ORM, Oracle 12c, SQL, PL/SQL.
SUMMER 2016 <i>Technology Stack</i>	AlCircle Pte Ltd Data-Analyst Intern (Python Application Developer): Created an application to source content for the editorial team. Crawler+Database Insertion+Automated Updates. Python, MySQL, REST.

References

Dr. Debajyoti Bera	Associate Professor, Department of Computer Science, Indraprastha Institute of Information Technology (IIIT) Delhi Email: dbera@iiitd.ac.in
Dr. Rohit Vaish	Assistant Professor, Department of Computer Science, Indian Institute of Technology (IIT) Delhi Email: rvaish@iitd.ac.in
Dr. Vyacheslav Kungurtsev	Researcher, Faculty of Computer Science and Engineering (FEL) Czech Technical University (CVUT) Email: kunguvya@fel.cvut.cz