KISHLAYA JAISWAL

Chennai Mathematical Institute
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EDUCATION	*Master of Science in Computer Science:* Chennai Mathematical Institute	2019-present
	Bachelor of Science (Honours): Mathematics & Computer Science (Overall CGPA 9.23) Chennai Mathematical Institute	2016-19
	Bachelor of Technology (partial): Computer Science & Engineering (Overall CGPA 9.9) Indian Institute of Information Technology	2015-16
	High School: St. Fidelis College (Percentile 89.8)	2011-15

RESEARCH EXPERIENCE

Research Intern May 2019 - July 2019
Tata Institute of Fundamental Research, Mumbai
Mentor: *Prof. Jaikumar Radhakrishnan*
Topic: *Quantum Information and Quantum Algorithms*

- Studied different paradigms of Quantum Algorithms in the circuit model including Quantum search algorithms and Quantum Fourier transform based algorithms
- Surveyed Quantum Random Walk based algorithms as a generalisation of the Grovers search algorithm
- Studied the work on *Classical Verification of Quantum Computations* by Urmilla Mahadev

INDUSTRY EXPERIENCE

Julia Intern June 2018 - September 2018
AimsQuant, Delhi
- Integrated fundamental data stock for extending financial research operations

Haskell Intern May 2018 - July 2018
Vacation Labs, Goa
- Built a real-life customer-facing project in Haskell
- Introduced Elm into the tech-stack as a side effect

Backend Engineering Intern June 2017 - July 2017
AimsQuant, Delhi
- Developed forward testing of investment strategies
- Created a backend request scheduler
- Integrated IJulia/IPython interactive notebook in the web-app to facilitate interactive financial research

TEACHING ASSISTANCE EXPERIENCE	*Algebra II* Instructed by Prof. Clare D'Cruz	January 2019 - April 2019
	Probability Theory Instructed by Prof. B V Rao	January 2019 - April 2019
	Functional Programming in Haskell By NPTEL (National Programme on Technology Enhanced Learning)	January 2018 - April 2018
	Advanced Programming Instructed by Prof. Samir Datta	January 2018 - April 2018
	Programming in Haskell Instructed by Prof. S P Suresh	August 2017 - December 2017

TECHNOLOGY SKILLS

Programming Languages: Haskell, Julia, Python, Javascript, Mathematica
Operations Technologies: AWS, Docker, CI/CD
Web Backend Technologies: NodeJS, MongoDB, PostgreSQL, Redis, SocketIO, HAProxy
Web Frontend Technologies: Elm, ReactJS, Bootstrap, SASS/SCSS, CoffeeScript, Google Poylmer
Typesetting Systems: XML, LaTeX

COURSEWORK

Computer Science: Machine Learning by Andrew Ng (Coursera), Functional Programming (Haskell), Advanced Programming (Python), Discrete Mathematics, Design and Analysis of Algorithms, Advanced Algorithms, Theory of Computation, Programming Language Concepts, Implementation of FP Languages, Mathematical Logic, Proofs and Types, Linear Programming and Combinatorial Optimization, Data Structures, Computer Organization

Mathematics: Linear Algebra, Group Theory, Ring and Field Theory, Module Theory, Galois Theory, Commutative Algebra, Lie Group Theory, Representation Theory, Topology, Real Analysis, Complex Analysis, Riemann Surfaces, Calculus, Differential Equations, Probability Theory, Measure Theoretic Probability, Analytic Number Theory, Game Theory, Stochastic Processes, Coding Theory

Physics: Classical Mechanics, Basic Electronics, Electrical Circuit Analysis, Digital Design

Others: Economics, Linguistics, English, Environmental Sciences

AWARDS & SCHOLARSHIPS	*Institutional Fee Waiver*	2016
	Regional Mathematics Olympiad Qualifier Stipend	2013
	SOF's International Mathematical Olympiad Scholarship	2014
	SOF's National Cyber Olympiad Scholarship	2014

| **COMMUNITY SERVICE** | *Web Dev* | 2015 - 2016 |
| | College Tech | |

- Developed college website

| | *Problem Writer* | 2014 - 2016 |
| | Proofathon | |

- Helped to create online mathematical contest for high school students all around the world

| **EXTRA-CURRICULAR ACTIVITIES** | *Research Talk* | February 2018 |

Presented a talk on Ethereum - core and applications, at TCS Research Cafe, during Tessellate 2018

| | *Adventures of The Mind* | August 2015 |

Achievement-focused mentoring camp for the most promising high school students
Got selected and sponsored by Brilliant.org