

# LAY JAIN

351 Massachusetts Ave, Cambridge MA 02139 | ☎617 301 1621

layjain@mit.edu | **GitHub:** layjain | **LinkedIn:** layjain

## EDUCATION

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**Massachusetts Institute of Technology**

BS: Computer Science Engineering, Mathematical Economics

MEng: Theoretical Computer Science

*Class of 2022*

Current GPA: 5.0/5.0

*2022-2023*

## WORK EXPERIENCE

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**Five Rings LLC, New York City, NY (Quantitative Researcher Intern)** *Jan 2022-Present*

–Quantitative modelling of market data, prediction and analysis.

**Citadel Securities, Chicago, IL (Quantitative Researcher Intern)** *June 2021-August 2021*

–Quantitative data analysis, prediction and modelling for options and other financial derivatives

**Mercari, Palo Alto, CA (Backend Engineer Intern)**

*May 2020-September 2020*

–Built ETL cronjobs for advertisement spend data

–Worked on deep-links API support for CRM campaigns

**Data Information Group, CSAIL (DeFi, Development)**

*April 2020-June 2021*

–Worked on bytecode formal verification for Ethereum Smart Contracts

–Built Sancus, a trustworthy loan protocol for DeFi exchanges.

**Soljic Group, EECS, MIT (Reinforcement Learning, Vision)**

*May 2019-April 2020*

–Worked on use of unitary matrices for reinforcement learning under Partially Observed MDPs

–Worked on equivariant and spatial transformer networks for object detection in lens-distorted images

**Respirix Inc. (Data Scientist Intern)**

*April 2019-June 2019*

–Analyzed correlation between time series respiratory data and heart conditions, leading to a 7% improvement in regression accuracy

## TEACHING EXPERIENCE

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• Lecturer, 6.S087 (Multidimensional Statistics)

*IAP 2022*

• Lecturer (Physics), Nazarbayev Intellectual School, Kazakhstan

*IAP 2020*

• Teaching Assistant, 8.011 (Classical Mechanics)

*Spring 2019*

• Grader: 6.045 (Complexity), 6.857 (Security), 6.042 (Math for CS)

## AWARDS AND HONORS

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• Second Prize, **HackMIT** 2019 Hackathon- Build Financial Revolution on Blockchain (Algorand)

• Felicitated by **Mr. Vladimir Putin**, Hon'ble President of Russia and **Sh. Narendra Modi**, the Hon'ble Prime Minister of India for Excellent Academic Performance *New Delhi, India*

• **Gold Medalist**, International Physics Olympiad IPhO 2017,2018

*Lisbon & Yogyakarta*

• **Gold Medalist**, Asian Physics Olympiad APhO 2017, 2018

*Hanoi & Yakutsk*

• **All India Rank 9** (out of 1 million) - **IIT-JEE** 2018, run by Indian Institute(s) of Technology

• **All India Rank 1** (out of 1,50,000)- **KVPY** 2018, run by Indian Institute of Science (IISc)

## PROGRAMMING LANGUAGES

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‡ Python(Proficient), C, Java, Solidity, Julia, Go, Mathematica