

Kevin Qian

MASTER'S STUDENT · MIT

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Education

Massachusetts Institute of Technology

2023 - 2024

MENG IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE

GPA: -/5.0

Advisor: Jonathan Ragan-Kelley

Massachusetts Institute of Technology

2019 - 2023

SB IN ELECTRICAL ENGINEERING & COMPUTER SCIENCE

GPA: 4.9/5.0

- *Graduate Coursework:* Algorithms, Probability, Inference, Statistical Learning Theory, Systems Security
- *Undergraduate Coursework:* Performance Engineering, Dynamic Computer Languages, Computational Photography, Computer Graphics, FPGA, Signal Processing, Operating Systems, Computation Structures, Machine Learning, Embedded Systems

Publications/Patents

PUBLICATIONS

Striped Attention: Faster Ring Attention for Causal Transformers

2023

WILLIAM BRANDON, ANIRUDDHA NRUSIMHA, **KEVIN QIAN**, ZACHARY ANKNER, TIAN JIN, ZHIYE SONG, JONATHAN RAGAN-KELLEY
arxiv:2311.09431

Heisenberg-Scaling Measurement Protocol for Analytic Functions with Quantum Sensor Networks

2019

KEVIN QIAN, ZACHARY ELDRIDGE, WENCHAO GE, GUIDO PAGANO, CHRISTOPHER MONROE, JAMES V. PORTO, ALEXEY V. GORSHKOV
Physical Review A 100, 042304 (2019), arXiv:1901.09042

PATENTS

Heisenberg Scaler

2023

ALEXEY V. GORSHKOV, JAMES V. PORTO, **KEVIN QIAN**, ZACHARY ELDRIDGE, WENCHAO GE, GUIDO PAGANO, CHRISTOPHER MONROE
U.S. Patent No. 11,562,049

Experience

MIT CSAIL - Visual Computing Languages & Systems Group

09/2021 - 05/2024

RESEARCH ASSISTANT (ADVISORS: YUKA IKARASHI AND PROFESSOR JONATHAN RAGAN-KELLEY)

Developing Exo, a domain specific language that facilitates development of high-performance computing libraries. Improved the language's hardware model to better support new hardware architectures (such as Intel's Advanced Matrix Extensions) and designed solution to enable more abstraction, traditionally a challenge in such languages.

Jane Street Capital

Summer 2023

SOFTWARE ENGINEERING INTERN, CORE SERVICES TEAM

Created monitoring to warn users when resources (e.g. VMs, storage) are incorrectly provisioned in automatic provisioning tool.

Jane Street Capital

Summer 2022

SOFTWARE ENGINEERING INTERN, CORE SERVICES AND POST TRADE TEAMS

Code-generated OCaml libraries to automate Workday accounting workflows. Integrated hybrid remote work schedules into tooling.

D.E. Shaw & Co.

Summer 2021

QUANTITATIVE DEVELOPER INTERN, OPTIONS TEAM

Modeled options implied volatility surfaces using variational autoencoders to predict day-to-day implied volatility change.

Facebook

Spring 2021

SOFTWARE ENGINEERING INTERN, NOTIFICATIONS TEAM

Improved user interaction with Facebook notifications by developing new signals for the notification model.

University of Maryland - Joint Quantum Institute

Summer 2018

RESEARCH ASSISTANT (ADVISORS: ZACHARY ELDRIDGE AND PROFESSOR ALEXEY GORSHKOV)

Invented an optimal method to measure functions of field parameters in physical systems by entangling sensors (see publications).

Volunteer/Leadership

Programming Languages Design & Implementation Conference

June 2023

VOLUNTEER

Aided with setting up audiovisual equipment and ensured that workshop/talks ran smoothly.

MIT Lion Dance Team

2019 - 2024

EXECUTIVE MEMBER

Lead practices and taught members lion dance fundamentals including stances, expression, improvisation, and cultural traditions. Choreographed for performances and performed for various communities, such as the Chinese American Association of Cambridge, Google Cambridge, restaurants, and MIT student-organized events.

Asian American Cultural Center

2022 - 2024

VOLUNTEER

Performed with the Lion Dance Team during the Lunar New Year festival, bringing good luck to local Chinatown restaurants.

Teaching

MIT Computer Graphics, Teaching Assistant

Fall 2023

Robert Frost MS Mathcounts Team, Instructor

2017 - 2019

Honors & Awards

Finalist, Regeneron Science Talent Search

2019

Second Award, Intel International Science and Engineering Fair

2019