

# Derek Qin

derekqin8@gmail.com | Phone: (972) 900-5736 | LinkedIn: in/dqin | GitHub: derekqin8

## EDUCATION

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**California Institute of Technology**, Pasadena, California

*Sept 2020 - June 2024*

- B.S. Major: Computer Science, Minor: Information and Data Sciences; **GPA:** 4.1/4.0
- **Selected Coursework:** **CS:** Distributed Systems, Compilers, Operating Systems, GPU Programming, Networks, Machine Learning & Data Mining **Math:** Discrete Math, Linear Algebra, Statistics, Probability Models, Statistical Inference, Bayesian Statistics

## SKILLS

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- **Languages:** Python, C, C++, CUDA, Java, JavaScript/TypeScript, Scala, SQL,
- **Tools:** Git, Mercurial, Docker, AWS
- **Development:** HTML/CSS, Angular, React, Express.js, Node.js

## EXPERIENCE

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**Databricks**

San Francisco, CA

*Software Engineer Intern*

*Summer 2023*

- Add observability UI for streaming metrics in Delta Live Tables
- Optimize metrics aggregation using incrementalization during data pipeline runtime

**Google**

Kirkland, WA

*Software Engineer Intern*

*Summer 2022*

- Created Java API framework for metrics-based alerting for GCP VM instances
- Added performant UI to Compute Engine Angular front-end with informative design for smooth DNS migration

**San Capital Management**

Remote

*Software Engineer Intern*

*Winter 2022*

- Built performant blockchain transaction parser and market making platform in Rust and Python for early stage trading startup

**Caltech Tensor Lab**

Pasadena, CA

*Machine Learning Research Intern*

*Winter 2021 - Fall 2021*

- Improved Fourier Neural Operator performance on PDEs with nonperiodic boundary conditions by up to 15% by designing a Fourier Continuation-based deep neural network, deployed using AWS

## LEADERSHIP AND TEACHING

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**Caltech CS 38/138 Algorithms**

Pasadena, CA

*Teaching Assistant*

*Spring 2022*

**Association for Young Scientists and Innovators**

Plano, Texas

*Vice President, Co-founder, Advisory Board*

*May 2019 - Present*

- Co-founded and led a 501(c)(3) nonprofit to mentor students in scientific research with over 400 members
- Organized inaugural AYSI Summer Coding Institute, which taught over 300 middle and high school students essential skills in MIT App Inventor and Machine Learning

## SELECTED AWARDS

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- USA Physics Olympiad, Medalist (National Top 200 Individuals)
- 5x American Invitational Mathematics Exam (AIME) Qualifier
- 8x American Mathematics Competition (AMC 10/12) Distinguished Honor Roll