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# CHARLES ZHAOXI XIONG

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## EDUCATION

### Harvard University

Ph.D., Physics  
Transferred from University of California, Berkeley

Cambridge, MA

05/2019

### Massachusetts Institute of Technology

B.S., Physics and Mathematics

Cambridge, MA

06/2014

## SKILLS

Languages: Python, R, MATLAB

Tools: Bash, Git, Vim, SQL (working knowledge), Bazel (working knowledge), Airflow (working knowledge), Jenkins (working knowledge), Pylint (working knowledge), various templating tools

## EXPERIENCE

### The Voleon Group

Member of Research Staff

Berkeley, CA

07/2019 – present

- Conducted high-dimensional applied machine learning research in financial domain
- Implemented systematic, market-neutral trading strategies in end-to-end machine learning pipelines
- Involved in full development cycle of new trading strategy, from infrastructure to research to productization

### Harvard University

Research Fellow

Cambridge, MA

09/2016 – 05/2019

- Trained neural networks and gradient boosting to reconstruct quantum physical states of atomic systems
- Built optimization models for cyclists in Tour de France competition, studied optimal cycling strategies

### University of California, Berkeley

Graduate Student Researcher

Berkeley, CA

09/2014 – 08/2016

- Studied mathematical classification of physical phases of matter at low temperatures, combined algebraic topology techniques with conventional physical methods

### Massachusetts Institute of Technology

Undergraduate Researcher

Cambridge, MA

08/2011 – 06/2014

- Studied new types of data encryption schemes that leveraged principles of quantum mechanics
- Wrote computationally intensive simulation code to predict magnetic properties of materials

### International Physics Olympiad

Gold Medalist

Merida, Mexico

07/2009

- Represented China (5-member delegation) and won gold medal at the 2009 International Physics Olympiad

### Asian Physics Olympiad

Gold Medalist

Bangkok, Thailand

04/2009

- Represented China (8-member delegation) and won gold medal at the 2009 Asian Physics Olympiad
- Won special award for highest score in theoretical exam

## RESEARCH

- 10 publications/preprints in quantum information theory, mathematical physics, and condensed matter physics
- 150+ total citations as of March 2021, first paper as PhD student single authored and cited 35+ times
- Presented at seminars at Yale, MIT, among others