

# CHRISTOPHER HOANG

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## EDUCATION

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### University of Michigan

4<sup>th</sup> Year M.S.E. in Computer Science and Engineering (4.00/4.00 GPA)

Ann Arbor, MI

Sept 2019 – May 2020

B.S.E. in Computer Science and Engineering (4.00/4.00 GPA)

Sept 2016 – May 2019

**Relevant coursework:** Machine Learning · Deep Learning in Vision\* · Ecological Approach to Vision\* · Combinatorics & Graph Theory\* · Numerical Linear Algebra\* · Real Analysis · Topology · Advanced Operating Systems\* · Compilers\*

\* - denotes graduate coursework

## PUBLICATIONS

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**Successor Landmarks for Long-Horizon Goal-Conditioned Reinforcement Learning.** Christopher Hoang, Sungryull Sohn, Jongwook Choi, Wilka Carvalho, Honglak Lee. **NeurIPS 2021**. Preliminary version in NeurIPS 2020 Workshop on Deep Reinforcement Learning.

**Spoofing the Limit Order Book: A Strategic Agent-Based Analysis.** Xintong Wang, Christopher Hoang, Yevgeniy Vorobeychik, Michael P. Wellman. **Games 2021**.

**Learning-Based Trading Strategies in the Face of Market Manipulation.** Xintong Wang, Christopher Hoang, Michael P. Wellman. **ICAIF 2020**. Preliminary version in ICML 2019 Workshop on AI in Finance.

## EXPERIENCE

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### The Voleon Group

#### Machine Learning Engineer

Berkeley, CA

Oct 2020 – Present

- Conducted experiments on machine learning models to improve forecasting of security prices and risk factors
- Deployed improvements to live trading system, modeling infrastructure, and trading strategy analysis tools

### University of Michigan Artificial Intelligence Laboratory

#### Research Assistant - Advisor: Honglak Lee

Ann Arbor, MI

June 2019 – Present

- Investigated deep reinforcement learning, transfer learning, and graph-based planning to develop landmarks-based framework for efficient exploration and goal-reaching in long-horizon, visual environments

#### Research Assistant - Advisor: Michael P. Wellman

Dec 2017 – June 2019

- Analyzed equilibrium profiles of a simulated multi-agent model of financial markets to develop trading strategies that can learn from market information in a manner robust to adversarial agents

### Citadel

#### Software Engineering Intern

New York City, NY

Jun 2019 – Aug 2019

- Deployed systems for transforming and analyzing market data and risk profiles of equity trading desks

### Amazon

#### Software Development Engineer Intern

Seattle, WA

Jun 2018 – Aug 2018

- Architected framework for executing computer vision/robotics workflows from data preprocessing to real-time inference, using dynamic job scheduling and hash signature graphs to scale and cache computations

## PROJECTS

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### Reconstruction-Driven Curiosity

- Developed intrinsic reward signal based on state reconstruction and evaluated method on Atari games

### Predicting Temporal Ordering of Video Frames

- Designed fusion network architectures to determine temporal ordering of frames extracted from video data

## HONORS AND AWARDS

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**2019 James B. Angell Scholar** (all undergraduate terms), all "A" record

**2018 D.E. Shaw Nexus Fellowship**, cohort of 50 fellows selected for academic achievement

**2016 Tuck & Ham-Hi Lee and Sheldon Howard W. & Ruth Hoff Scholar Grants**, \$80,000 over 4 years

**2016 William J. Branstrom Freshman Prize**, top 5% of freshmen class at University of Michigan

## ADDITIONAL

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Alumnus of Thomas Jefferson High School for Science and Technology

Skills: Python, PyTorch, C++, R, C