

Boyuan Chen

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EDUCATION

Massachusetts Institute of Technology (MIT), PhD student in EECS 2021 - Present
UC Berkeley, BA Computer Science (EECS Honor Class), Applied Math, Class of 2021, GPA 3.96 2017-2021

Relevant Coursework: Reinforcement Learning(A+), Deep Unsupervised Learning (A+), Advanced Robotics(A+), Natural Language Processing(A), Machine Learning(A), Computer Vision(A), AI System(A+), Robotics(A+), Algorithms(A), Data Structure(A), Computer Program(A+), Computer Architecture(A), Stochastic Process(A), Real Analysis(A+), Complex Analysis(A+), Probability(A)

EXPERIENCE

X, the moonshot company (formerly known as Google X)

PhD resident, machine learning for robotics May 2022 - Aug 2022

- Develop machine learning algorithms for robots that will help us in daily life

MIT Computer Science and Artificial Intelligence Laboratory (CSAIL)

Researcher Sep 2021 - present

- Machine learning for robotics advised by Prof. Russ Tedrake and Prof. Joshua Tenenbaum

Berkeley Artificial Intelligence Research Lab

Researcher Jan 2019 - Aug 2021

- Computer vision research Prof. Trevor Darrell; Robotics learning research with Prof. Pieter Abbeel,
- Student researcher on unsupervised learning, 3d vision, visual reinforcement learning and generalizable manipulation.

Robomooc.com, Chongqing Muke Robotics Inc.

Startup Founder Nov 2017 - Mar 2020

- Company providing robotics education solution to K12 education
- Lead the software and hardware development of robot kits that we sell to student participants in robotics competitions

Robomaster at Berkeley (Robotics Team & Club)

Founder, Captain Oct 2018 - 2021

- Lead 20-member robotics team building autonomous shooting robots for ICRA RoboMaster AI Challenge
- Designed and implemented novel methods for data collection, object detection and inference acceleration

Open Source Project Contributor

- Contributor of DL Framework Pytorch, Torchvision; Physics Engine Bullet3; Robotics framework Drake 2018 - 2021

SKILLSET

Language & Tools: Python, C++/C, Java, Cmake, ROS, NVIDIA Isaac, PyTorch, Tensorflow, OpenVino, TensorRT, ZeroMQ, Qt5, AWS
Algorithms: Computer Vision, Machine Learning, Reinforcement Learning, Path Planning, Kinematics, PID, Dynamics Programming
Hardware: CAD (Solidworks), Embedded System, ESC, Cable Management, Lathing, Laser Cutting

PUBLICATION

Unsupervised 3d Keypoint Learning for control 2020 - 2021

B. Chen, D. Pathak, P. Abbeel. Accepted to ICML 2021.

Zero-shot Policy Learning with Spatial Temporal Reward Decomposition on Contingency-aware Observation 2019 Aug - 2020

B. Chen*, H. Xu*, Y. Gao, T. Darrell. Accepted to ICRA 2021

Discovering Diverse Multi-Agent Strategic Behavior via Reward Randomization 2019 Dec - 2020

Z. Tang, C. Yu, B. Chen, H. Xu, X Wang, F. Fang, S. Du, Y. Wang, Y. Wu. Accepted to ICLR 2021

ROBOTICS PROJECTS

Autonomous multi-floor food delivery robot (Control, Sensing, Vision, ROS) Sep 2019 - Dec 2019

ICRA Robomaster AI Challenge Autonomous Combat Robot (Vision, ROS, Control, AI) Jan 2019 - May 2019

Personal drivable RC robot (CAD, Manufacture, Electronics, Control, Embedded System) May 2019 - Aug 2019

HONOR

Seneff-Zue CS Fellowship Feb 2021

Winner, Facebook Pytorch Summer Hackathon Aug 2019

Finalist, ICRA 2019 Robomaster AI Challenge May 2019

Winner, Record Keeper, UC Berkeley CS 61C Neural Network Inference Optimization Contest Aug 2018