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

Google X (or X, the Moonshot Factory)
AI resident, machine learning for sequential decision making — *May 2022 – Aug 2022*
- Use large language model and machine learning to build smart robots

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; Reinforcement learning research with Prof. Pieter Abbeel,

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

Miscellaneous
- Contributor of DL Framework Pytorch, Torchvision; Physics Engine Bullet3 — *2018 – 2021*
- Exec board member of MIT Chess Club, Player in MIT team in collegiate chess league — *2021-present*

SKILLSET

Language & Tools: Python, C++/C, Java, ROS, NVIDIA Isaac, PyTorch, Tensorflow, OpenVino, TensorRT, Numpy, Jax, MongoDB
Algorithms: Computer Vision, Machine Learning, Reinforcement Learning, Path Planning, Control, Dynamics Programming

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

SELECTED PROJECTS

Autonomous multi-floor food delivery robot (Control, Sensing, Vision, ROS) — *Sep 2019 - Dec 2019*
ICRA Robomaster AI Challenge Autonomous Combat Robot (AI Decision Making, Vision, ROS, Control) — *Jan 2019 - May 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*
Winner, CS170 Efficient Algorithms Contest — *Oct 2018*
2nd place, Google Puzzlehunt, second fastest prize eligible team out of 800+ teams of Google employees — *Jul 2022*
Honor degree in EECS, High honor in general scholarship, Dean's List, UC Berkeley — *2017-2021*