

# Lawrence Yunliang Chen

---

## CONTACT INFORMATION

E-mail: [yunliang.chen@berkeley.edu](mailto:yunliang.chen@berkeley.edu)  
Tel: +1 (832) 417-9492  
Address: 2100 Channing Way, Apt 209, Berkeley, CA 94704  
Homepage: [yunliangchen.github.io](http://yunliangchen.github.io)  
Linkedin: [www.linkedin.com/in/lawrence-yunliang-chen](http://www.linkedin.com/in/lawrence-yunliang-chen)  
Google Scholar: [scholar.google.com/citations?user=xYP4uuIAAAAJ&hl=en](https://scholar.google.com/citations?user=xYP4uuIAAAAJ&hl=en)

## RESEARCH INTERESTS

Robot learning and manipulation; Cross-embodiment learning; 3D vision, language, and multimodality; Foundation models; Generalization

## EDUCATION

**University of California, Berkeley** *Aug. 2020 – Present*

- Ph.D. in Industrial Engineering and Operations Research GPA: 4.00/4.00
- M.S. in Electrical Engineering and Computer Science
- Advisor: Ken Goldberg
- Supported by NSF Graduate Research Fellowship
- Relevant courses: Deep Reinforcement Learning (A+), Robotic Manipulation (A+), Computer Vision (A+), Deep Neural Networks (A+), Natural Language Processing (A), Computer Graphics (A), Parallel Computing (A), Computer Architecture (A+), Data Structure (A+), Linear Optimization (A+), Nonlinear Optimization (A+), Stochastic Process (A+), Network Flows and Graphs (A+)

**University of Southern Denmark, Denmark** *Summer 2022*

- Study Abroad: Elite Summer School in Robotics and Entrepreneurship
- Fully funded by a scholarship from the Innovation Center Denmark (ICDK)
- Grade: 12/12 (Denmark 7-point grading scale)

**University of California, Los Angeles** *Sept. 2016 – Jun. 2020*

- B.S. Applied Mathematics and Statistics (Summa Cum Laude) GPA: 4.00/4.00
- Advisor: Jungseock Joo
- Relevant courses: Linear Algebra (A+), Real Analysis (Honors) (A+), Complex Analysis (Honors) (A+), Numerical Analysis (A+), Stochastic Processes (A+), Algorithms (A+), Mathematical Modeling (A+), Mathematical Statistics (A), Computational Statistics (A+), Data Mining (A+), Monte Carlo Methods (A+), Statistical Consulting (A+)

**London School of Economics and Political Science, UK** *Summer 2017*

- Study Abroad: Intermediate Microeconomics (A+)

## PREPRINTS & WORKING PAPERS

[2] **In-Context Imitation Learning via Next-Token Prediction**  
Letian Fu\*, Huang Huang\*, Gaurav Datta\*, **Lawrence Yunliang Chen**, William Chung-Ho Panitch, Fangchen Liu, Hui Li, Ken Goldberg.  
*Under Review.*

[1] **Robo-DM: Efficient Robot Big Data Management.**  
Kaiyuan Chen, Letian Fu, David Huang, Yanxiang Zhang, **Lawrence Yunliang Chen**, Huang Huang, Kush Hari, Ashwin Balakrishna, Pannag R Sanketi, John Kubiawicz, Ken Goldberg.  
*Under Review.*

PUBLICATIONS

[18] **RoVi-Aug: Robot and Viewpoint Augmentation for Cross-Embodiment Robot Learning.**

Lawrence Yunliang Chen\*, Chenfeng Xu\*, Karthik Dharmarajan, Zubair Irshad, Richard Cheng, Kurt Keutzer, Masayoshi Tomizuka, Quan Vuong, Ken Goldberg. *Conference on Robot Learning (CoRL)*, 2024. **Oral Presentation.**

[17] **Mirage: Cross-Embodiment Zero-Shot Policy Transfer with Cross-Painting.**

Lawrence Yunliang Chen\*, Kush Hari\*, Karthik Dharmarajan\*, Chenfeng Xu, Quan Vuong, Ken Goldberg. *Robotics: Science and Systems (RSS)*, 2024.

[16] **DROID: A Large-Scale In-The-Wild Robot Manipulation Dataset.**

Alexander Khazatsky\*, Karl Pertsch\*, Suraj Nair, Ashwin Balakrishna, Sudeep Dasari, Siddharth Karamcheti, Soroush Nasiriany, Mohan Kumar Srirama, **Lawrence Yunliang Chen**, Kirsty Ellis, Peter David Fagan, Joey Hejna, Masha Itkina, Marion Lepert, Yecheng Jason Ma, Patrick Tree Miller, Jimmy Wu, Suneel Belkhale, Shivin Dass, Huy Ha, Arhan Jain, Abraham Lee, Youngwoon Lee, Marius Memmel, Sung-jae Park, Ilija Radosavovic, Kaiyuan Wang, Albert Zhan, Kevin Black, Cheng Chi, Kyle Beltran Hatch, Shan Lin, Jingpei Lu, Jean Mercat, Abdul Rehman, Pannag R Sanketi, Archit Sharma, Cody Simpson, Quan Vuong, Homer Rich Walke, Blake Wulfe, Ted Xiao, Jonathan Heewon Yang, Arefeh Yavary, Tony Z. Zhao, Christopher Agia, Rohan Baijal, Mateo Guaman Castro, Daphne Chen, Qiuyu Chen, Trinity Chung, Jaimyn Drake, Ethan Paul Foster, Jensen Gao, David Antonio Herrera, Minh Heo, Kyle Hsu, Jiaheng Hu, Donovan Jackson, Charlotte Le, Yunshuang Li, Roy Lin, Zehan Ma, Abhiram Maddukuri, Suvir Mirchandani, Daniel Morton, Tony Nguyen, Abigail O’Neill, Rosario Scalise, Derick Seale, Victor Son, Stephen Tian, Emi Tran, Andrew E. Wang, Yilin Wu, Annie Xie, Jingyun Yang, Patrick Yin, Yunchu Zhang, Osbert Bastani, Glen Berseth, Jeannette Bohg, Ken Goldberg, Abhinav Gupta, Abhishek Gupta, Dinesh Jayaraman, Joseph J Lim, Jitendra Malik, Roberto Martín-Martín, Subramanian Ramamoorthy, Dorsa Sadigh, Shuran Song, Jiajun Wu, Michael C. Yip, Yuke Zhu, Thomas Kollar, Sergey Levine, Chelsea Finn. *Robotics: Science and Systems (RSS)*, 2024.

[15] **Octo: An Open-Source Generalist Robot Policy.**

Dibya Ghosh\*, Homer Rich Walke\*, Karl Pertsch\*, Kevin Black\*, Oier Mees\*, Sudeep Dasari, Joey Hejna, Tobias Kreiman, Charles Xu, Jianlan Luo, You Liang Tan, **Lawrence Yunliang Chen**, Pannag R Sanketi, Quan Vuong, Ted Xiao, Dorsa Sadigh, Chelsea Finn, Sergey Levine. *Robotics: Science and Systems (RSS)*, 2024.

[14] **Open X-Embodiment: Robotic Learning Datasets and RT-X Models.** Open X-Embodiment Collaboration.

Abby O’Neill, Abdul Rehman, Abhiram Maddukuri, Abhishek Gupta, Abhishek Padalkar, Abraham Lee, Acorn Pooley, Agrim Gupta, Ajay Mandekar, Ajinkya Jain, Albert Tung, Alex Bewley, Alex Herzog, Alex Irpan, Alexander Khazatsky, Anant Rai, Anchit Gupta, Andrew Wang, Anikait Singh, Animesh Garg, Anirudha Kembhavi, Annie Xie, Anthony Brohan, Antonin Raffin, Archit Sharma, Arefeh Yavary, Arhan Jain, Ashwin Balakrishna, Ayzaan Wahid, Ben Burgess-Limerick, Beomjoon Kim, Bernhard Schölkopf, Blake Wulfe, Brian Ichter, Cewu Lu, Charles Xu, Charlotte Le, Chelsea Finn, Chen Wang, Chenfeng Xu, Cheng Chi, Chenguang Huang, Christine Chan, Christopher Agia, Chuer Pan, Chuyuan Fu, Coline Devin, Danfei Xu, Daniel Morton, Danny Driess, Daphne Chen, Deepak Pathak, Dhruv Shah, Dieter Büchler, Dinesh Jayaraman, Dmitry Kalashnikov, Dorsa Sadigh, Edward Johns, Ethan Foster, Fangchen Liu, Federico Ceola, Fei Xia, Feiyu Zhao, Freek Stulp, Gaoyue Zhou, Gaurav S. Sukhatme, Gautam Salhotra, Ge Yan, Gilbert Feng,

Giulio Schiavi, Glen Berseth, Gregory Kahn, Guanzhi Wang, Hao Su, Hao-Shu Fang, Haochen Shi, Henghui Bao, Heni Ben Amor, Henrik I Christensen, Hiroki Furuta, Homer Walke, Hongjie Fang, Huy Ha, Igor Mordatch, Ilija Radosavovic, Isabel Leal, Jacky Liang, Jad Abou-Chakra, Jaehyung Kim, Jaimyn Drake, Jan Peters, Jan Schneider, Jasmine Hsu, Jeannette Bohg, Jeffrey Bingham, Jeffrey Wu, Jensen Gao, Jiaheng Hu, Jiajun Wu, Jialin Wu, Jiankai Sun, Jianlan Luo, Jiayuan Gu, Jie Tan, Jihoon Oh, Jimmy Wu, Jingpei Lu, Jingyun Yang, Jitendra Malik, João Silvério, Joey Hejna, Jonathan Booher, Jonathan Tompson, Jonathan Yang, Jordi Salvador, Joseph J. Lim, Junhyek Han, Kaiyuan Wang, Kanishka Rao, Karl Pertsch, Karol Hausman, Keegan Go, Keerthana Gopalakrishnan, Ken Goldberg, Kendra Byrne, Kenneth Oslund, Kento Kawaharazuka, Kevin Black, Kevin Lin, Kevin Zhang, Kiana Ehsani, Kiran Lekkala, Kirsty Ellis, Krishan Rana, Krishnan Srinivasan, Kuan Fang, Kunal Pratap Singh, Kuo-Hao Zeng, Kyle Hatch, Kyle Hsu, Laurent Itti, **Lawrence Yunliang Chen**, Lerrel Pinto, Li Fei-Fei, Liam Tan, Linxi "Jim" Fan, Lionel Ott, Lisa Lee, Luca Weihs, Magnum Chen, Marion Lepert, Marius Memmel, Masayoshi Tomizuka, Masha Itkina, Mateo Guaman Castro, Max Spero, Maximilian Du, Michael Ahn, Michael C. Yip, Mingtong Zhang, Mingyu Ding, Minh Heo, Mohan Kumar Srirama, Mohit Sharma, Moo Jin Kim, Naoaki Kanazawa, Nicklas Hansen, Nicolas Heess, Nikhil J Joshi, Niko Suenderhauf, Ning Liu, Norman Di Palo, Nur Muhammad Mahi Shafiullah, Oier Mees, Oliver Kroemer, Osbert Bastani, Pannag R Sanketi, Patrick "Tree" Miller, Patrick Yin, Paul Wohlhart, Peng Xu, Peter David Fagan, Peter Mitrano, Pierre Sermanet, Pieter Abbeel, Priya Sundaesan, Qiuyu Chen, Quan Vuong, Rafael Rafailov, Ran Tian, Ria Doshi, Roberto Mart'in-Mart'in, Rohan Bajjal, Rosario Scalise, Rose Hendrix, Roy Lin, Runjia Qian, Ruohan Zhang, Russell Mendonca, Rutav Shah, Ryan Hoque, Ryan Julian, Samuel Bustamante, Sean Kirmani, Sergey Levine, Shan Lin, Sherry Moore, Shikhar Bahl, Shivin Dass, Shubham Sonawani, Shuran Song, Sichun Xu, Siddhant Haldar, Siddharth Karamcheti, Simeon Adebola, Simon Guist, Soroush Nasiriany, Stefan Schaal, Stefan Welker, Stephen Tian, Subramanian Ramamoorthy, Sudeep Dasari, Suneel Belkhale, Sungjae Park, Suraj Nair, Suvir Mirchandani, Takayuki Osa, Tanmay Gupta, Tatsuya Harada, Tatsuya Matsushima, Ted Xiao, Thomas Kollar, Tianhe Yu, Tianli Ding, Todor Davchev, Tony Z. Zhao, Travis Armstrong, Trevor Darrell, Trinity Chung, Vidhi Jain, Vincent Vanhoucke, Wei Zhan, Wenxuan Zhou, Wolfram Burgard, Xi Chen, Xiaolong Wang, Xinghao Zhu, Xinyang Geng, Xiyuan Liu, Xu Liangwei, Xuanlin Li, Yao Lu, Yecheng Jason Ma, Yejin Kim, Yevgen Chebotar, Yifan Zhou, Yifeng Zhu, Yilin Wu, Ying Xu, Yixuan Wang, Yonatan Bisk, Yoonyoung Cho, Youngwoon Lee, Yuchen Cui, Yue Cao, Yueh-Hua Wu, Yujin Tang, Yuke Zhu, Yunchu Zhang, Yunfan Jiang, Yunshuang Li, Yunzhu Li, Yusuke Iwasawa, Yutaka Matsuo, Zehan Ma, Zhuo Xu, Zichen Jeff Cui, Zichen Zhang, Zipeng Lin

*IEEE International Conference on Robotics and Automation (ICRA)*, 2024. **Best Paper Award.**

[13] **Optimal Arrangement and Rearrangement of Objects on Shelves to Minimize Robot Retrieval Cost.**

**Lawrence Yunliang Chen**, Huang Huang, Ken Goldberg.

*IEEE Transactions on Automation Science and Engineering*, 2023.

[12] **Robot-Assisted Vascular Shunt Insertion with the dVRK Surgical Robot.**

Karthik Dharmarajan, Will Panitch, Baiyu Shi, Huang Huang, **Lawrence Yunliang Chen**, Masoud Moghani, Qinxu Yu, Kush Hari, Thomas Low, Danyal Fer, Animesh Garg, Ken Goldberg

*Journal of Medical Robotics Research (JMRR)*, 2023.

- [11] **Language Embedded Radiance Fields for Zero-Shot Task-Oriented Grasping.**  
Adam Rashid\*, Satvik Sharma\*, Chung Min Kim, Justin Kerr, **Lawrence Yunliang Chen**, Angjoo Kanazawa, Ken Goldberg.  
*Conference on Robot Learning (CoRL)*, 2023. **Oral Presentation (6.6%). Best Paper/Best Student Paper Finalist.**
- [10] **Semantic Mechanical Search with Large Vision and Language Models.**  
Satvik Sharma\*, Huang Huang\*, Kaushik Shivakumar, **Lawrence Yunliang Chen**, Ryan Hoque, Brian Ichter, Ken Goldberg.  
*Conference on Robot Learning (CoRL)*, 2023.
- [9] **Bagging by Learning to Singulate Layers Using Interactive Perception.**  
**Lawrence Yunliang Chen**, Baiyu Shi, Roy Lin, Daniel Seita, Ayah Ahmad, Richard Cheng, Thomas Kollar, David Held, Ken Goldberg.  
*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2023. **Best Industrial Robotics Research for Applications Finalist.**
- [8] **A Trimodal Framework for Robot-Assisted Vascular Shunt Insertion When a Supervising Surgeon Is Local, Remote, or Unavailable.**  
Karthik Dharmarajan\*, William Panitch\*, Baiyu Shi, Huang Huang, **Lawrence Yunliang Chen**, Thomas Low, Danyal Fer, Ken Goldberg.  
*International Symposium on Medical Robotics (ISMR)*, 2023.
- [7] **AutoBag: Learning to Open Plastic Bags and Insert Objects.**  
**Lawrence Yunliang Chen**, Baiyu Shi, Daniel Seita, Richard Cheng, Thomas Kollar, David Held, Ken Goldberg.  
*IEEE International Conference on Robotics and Automation (ICRA)*, 2023.
- [6] **Fleet-DAGger: Interactive Robot Fleet Learning with Scalable Human Supervision.**  
Ryan Hoque, **Lawrence Yunliang Chen**, Satvik Sharma, Karthik Dharmarajan, Brijen Thananjeyan, Pieter Abbeel, Ken Goldberg.  
*Conference on Robot Learning (CoRL)*, 2022. **Oral Presentation (6.5%).**
- [5] **Efficiently Learning Single-Arm Fling Motions to Smooth Garments.**  
**Lawrence Yunliang Chen\***, Huang Huang\*, Ellen Novoseller, Daniel Seita, Jeff Ichnowski, Michael Laskey, Richard Cheng, Thomas Kollar, Ken Goldberg.  
*The International Symposium on Robotics Research (ISRR)*, 2022.
- [4] **Optimal Shelf Arrangement to Minimize Robot Retrieval Time.**  
**Lawrence Yunliang Chen**, Huang Huang, Michael Danielczuk, Jeffrey Ichnowski, Ken Goldberg.  
*IEEE International Conference on Automation Science and Engineering (CASE)*, 2022. **Best Student Paper Finalist.**
- [3] **Real2Sim2Real: Self-Supervised Learning of Physical Single-Step Dynamic Actions for Planar Robot Casting.**  
Vincent Lim\*, Huang Huang\*, **Lawrence Yunliang Chen**, Jonathan Wang, Jeffrey Ichnowski, Daniel Seita, Michael Laskey, Ken Goldberg.  
*IEEE International Conference on Robotics and Automation (ICRA)*, 2022.
- [2] **Understanding and Mitigating Annotation Bias in Facial Expression Recognition.**  
**Yunliang Chen**, Jungseock Joo.  
*IEEE International Conference on Computer Vision (ICCV)*, 2021.

[1] **A Multi-Chamber Smart Suction Cup for Adaptive Gripping and Haptic Exploration.**

Tae Myung Huh, Kate Sanders, Michael Danielczuk, Monica Li, **Yunliang Chen**, Ken Goldberg, Hannah S. Stuart.

*IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)*, 2021.

**WORK EXPERIENCE**

**NVIDIA Corporation** Santa Clara, CA  
*Research Intern* Sept. 2024 - Present

- Generalist Embodied Agent Research (GEAR) Lab
- Manager/Mentor: Jim Fan, Prof. Yuke Zhu, Zhenjia Xu

**NVIDIA Corporation** Seattle, WA  
*Research Intern* Jun. 2024 - Sept. 2024

- Seattle Robotics Lab
- Manager/Mentor: Arsalan Mousavian, Clemens Eppner

**Cigna Corporation** Bloomfield, CT  
*Intern* Jun. 2019 - Aug. 2019

- Designed automated templates that source from the accounting database to ensure accuracy of the financials
- Identified business drivers and key metrics of each product and proposed improvement opportunities to senior management

**Pacific Life Insurance Company** Newport Beach, CA  
*Intern* Jun. 2018 - Aug. 2018

- Developed a pricing tool for derivative assets including options and interest rate swaps to enhance the hedging program
- Built a predictive model on policy lapses that achieves an accuracy of over 99% using various machine learning algorithms

**INVITED TALKS**

**Bagging by Learning to Singulate Layers Using Interactive Perception.** 2023 Bay Area Robotics Symposium Oct. 2023

**Combining Pre-Approval Clinical Trials and Post-Approval Spontaneous Adverse Event Reporting for Improved Safety Signaling.** 2021 INFORMS Annual Meeting Oct. 2021  
2021 INFORMS Healthcare Meeting Aug. 2021

**HONORS & AWARDS**

**Grassi Fellowship** 2023 - 2024  
• *Berkeley IEOR Department's endowed PhD fellowship, one awardee per year*

**Katta G. Murty Prize for Best Paper in Optimization** 2023  
• *For the paper "Optimal Shelf Arrangement and Rearrangement to Minimize Robot Retrieval Time," IEOR Department, UC Berkeley*

**National Science Foundation Graduate Research Fellowship** 2022 - 2025

**Scholarship for the International Elite Summer School in Robotics and Entrepreneurship** 2022  
• *Funded by the Danish Ministry of Higher Education and Science, Odense Municipality, the Innovation Centre Denmark, the Novo Nordisk Foundation, and private partners*

**Chiang Fellowship for Graduate Scholars in Manufacturing and Engineering** (UC Berkeley IEOR Departmental Fellowship) 2020 - 2021

<b>TEACHING</b>	<p><b>IEOR 262A, 263A (Graduate): Stochastics and Optimization</b> UC Berkeley  <i>Tutor for first-year PhD students</i> 2023 – 2024</p> <p><b>IEOR 215 (Graduate): Analysis and Design of Databases</b> UC Berkeley  <i>Graduate Student Instructor</i> Spring 2022</p>
<b>MENTORING &amp; OUTREACH</b>	<p><b>Berkeley AI Research (BAIR) Undergraduate Mentorship Program</b>  <i>Mentor</i> 2022 – Present</p> <p><b>VEX Worlds Championship qualifying One World Showcase Event</b> 2023</p> <ul style="list-style-type: none"> <li>• Presented research projects to high teams participating in the VEX Robotics Competition</li> </ul> <p><b>AUTOLab Open House at SWE Mini-University</b> 2023</p> <ul style="list-style-type: none"> <li>• Showcased research projects at AUTOLab to underserved Bay Area high school students, organized by the Society of Women Engineers (SWE) at UC Berkeley</li> </ul> <p><b>AUTOLab Open House at The Berkeley Showcase</b> 2022</p> <ul style="list-style-type: none"> <li>• Showcased research projects at AUTOLab to prospective Bay Area/Northern California high school students who are underrepresented, first-generation, or attend an under-resourced school at The Berkeley Showcase (TBS), an event organized by the Office of Undergraduate Admissions</li> </ul> <p><b>Cabrillo Community College Berkeley Robotics Tour</b> 2022</p> <ul style="list-style-type: none"> <li>• Demoed research projects and met with students of the SACNAS chapter at Cabrillo College</li> </ul>
<b>ACADEMIC SERVICE</b>	<p><b>Workshop Organizer</b></p> <p>1st Workshop on X-Embodiment Robot Learning @ CoRL2024 2024  (<a href="https://sites.google.com/view/xembodimentworkshop">https://sites.google.com/view/xembodimentworkshop</a>)</p> <p>4th Workshop on Representing and Manipulating Deformable Objects @ ICRA2024  (<a href="https://deformable-workshop.github.io/icra2024">https://deformable-workshop.github.io/icra2024</a>) 2024</p> <p><b>Journal Reviewer</b></p> <p>International Journal of Computer Vision (IJCV) 2024  ACM Transactions on Human-Robot Interaction (THRI) 2024  IEEE Transactions on Robotics (T-RO) 2024  IEEE Robotics and Automation Letters (RA-L) 2024  IEEE Transactions on Image Processing (TIP) 2023  IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI) 2021, 2024</p> <p><b>Conference Reviewer</b></p> <p>IEEE International Conference on Robotics and Automation (ICRA) 2022 - 2025  IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2023 - 2024</p> <p><b>Workshop Program Committee/Reviewer</b></p> <p>NeurIPS 2023 6th Robot Learning Workshop 2023  CoRL 2023 Workshop on Language and Robot Learning Language as Grounding 2023</p> <p><b>Application Reviewer</b></p> <p>UC Berkeley Master of Analytics program 2023</p> <p><b>Volunteer Manager of Berkeley AI Research Social Media</b>  Manage the Twitter, LinkedIn, Facebook pages of BAIR account (130K+ Followers) 2024</p>

**TECHNICAL  
SKILLS**

**Programming Languages:** Python, R, C/C++, Java, MATLAB, Mathematica,  
Robot Operating System (ROS)

**TEST SCORES**

**GRE:** Verbal - 165 (96%); Quantitative - 169 (95%); Analytical Writing - 4.5  
**GRE Math Subject Test:** 940 (99%)

**OTHER**

**Interests:** UCLA Symphony, Violinist

2016 – 2018