

Yewen (Evan) Pu

yewen.pu@autodesk.com

<https://evanthebouncy.github.io/>

Employment

Autodesk Research Senior Research Scientist	2020 -
Massachusetts Institute of Technology Postdoctoral Researcher	2019 - 2020
Massachusetts Institute of Technology Graduate Student Researcher	2012 - 2019
Learable.ai Machine Learning Advisor	2018 - 2019
Microsoft Research Research Intern	2018 summer

Education

Massachusetts Institute of Technology PhD of Computer Science Advisors: Armando Solar-Lezama, Leslie Kaelbling	2019
University of California, Berkeley B.A. of Computer Science B.A. of Mathematics, with high honor	2011

Invited Talks

Pragmatic Program Synthesis @ UCSD PL Seminar	2024 Feb
Natural Programming in Communicating Designs @ 2023 Frontiers in Design Representation Summer School	2023 June
Programming as Collaborative Search @ Stanford cocolab	2023 April

Communicating Natural Programs to Humans and Machines @ carper.ai	2022 Nov
LARC : Language annotated Abstraction and Reasoning Corpus @ MIT cocosci	2021 April
Program Synthesis with Pragmatic Communication @ MIT Cpl-lab	2021 Jan
Program Synthesis with Pragmatic Communication @ Ras Bodik Group @ University of Washington	2020 Nov
Program Synthesis with Pragmatic Communication @ PL Seminar @ UCSD	2020 Oct
Program Synthesis with Pragmatic Communication @ Stanford cocolab	2020 Aug
Program Synthesis with Pragmatic Communication @ Variation Lab @ Harvard SEAS	2020 June
Program Synthesis as Communication @ Autodesk	2020 March
Program Synthesis as Communication @ Deepmind	2019 Dec
Program Synthesis : From Communication to Computation @ Machine Programming Group @ Intel Labs	2019 Nov
Write, Execute, Assess: Program Synthesis with a REPL @ Google Brain	2019 Oct
Write, Execute, Assess: Program Synthesis with a REPL @ Facebook	2019 Oct

Services

Thesis Committee

Fernando Abigail Galicia Mendoza, 2023 Universidad Nacional Autónoma de México

Reviewer

NeurIPS	2018 - 2023
ICML	2018 - 2023

ICLR	2020 - 2023
CogSci	2022 - 2023
AAAI	2023
UIST	2023
UAI	2018

Publications

NeurIPS 2023	Zhiao Huang, Feng Chen, <u>Yewen Pu</u> , Chunru Lin, Hao Su, Chuang Gan DiffVL: Scaling Up Soft Body Manipulation using Vision-Language Driven Differentiable Physics
NeurIPS 2023	Di Huang, Ziyuan Nan, Xing Hu, Pengwei Jin, Shaohui Peng, Yuanbo Wen, Rui Zhang, Zidong Du, Qi Guo, <u>Yewen Pu</u> , Yunji and Chen ANPL: Towards Natural Programming with Interactive Decomposition
NeurIPS 2022 (Oral)	Sam Acquaviva*, <u>Yewen Pu</u> *, Marta Kryven, Theodoros Sechopoulos, Catherine Wong, Gabrielle Ecanow, Maxwell Nye, Michael Tessler, Josh Tenenbaum Communicating natural programs to humans and machines
SIGGRAPH 2021	Karl DD Willis, <u>Yewen Pu</u> , Jieliang Luo, Hang Chu, Tao Du, Joseph G Lambourne, Armando Solar-Lezama, Wojciech Matusik Fusion 360 gallery: A dataset and environment for programmatic cad construction from human design sequences
NeurIPS 2021	Yichen Yang, Jeevana Priya Inala, Osbert Bastani, <u>Yewen Pu</u> , Armando Solar-Lezama, Martin Rinard Program synthesis guided reinforcement learning for partially observed environments
ICLR 2021	Maxwell Nye, <u>Yewen Pu</u> , Matthew Bowers, Jacob Andreas, Joshua B Tenenbaum, Armando Solar-Lezama Representing partial programs with blended abstract semantics

NeurIPS 2020	Jeevana Priya Inala, Yichen Yang, James Paulos, <u>Yewen Pu</u> , Osbert Bastani, Vijay Kumar, Martin Rinard, Armando Solar-Lezama Neurosymbolic Transformers for Multi-Agent Communication
NeurIPS 2020	<u>Yewen Pu</u> , Kevin Ellis, Marta Kryven, Josh Tenenbaum, Armando Solar-Lezama Program synthesis with pragmatic communication
NeurIPS 2019	Kevin Ellis*, Maxwell Nye*, <u>Yewen Pu</u> *, Felix Sosa*, Josh Tenenbaum, Armando Solar-Lezama Write, execute, assess: Program synthesis with a repl
NeurIPS 2019	Charith Mendis, Cambridge Yang, <u>Yewen Pu</u> , Dr Saman Amarasinghe, Michael Carbin Compiler auto-vectorization with imitation learning
NeurIPS 2018	Osbert Bastani, <u>Yewen Pu</u> , Armando Solar-Lezama Verifiable reinforcement learning via policy extraction
SIGGRAPH Asia 2018	Tao Du, Jeevana Priya Inala, <u>Yewen Pu</u> , Andrew Spielberg, Adriana Schulz, Daniela Rus, Armando Solar-Lezama, Wojciech Matusik Inversecsg: Automatic conversion of 3d models to csg trees
ICML 2018 (Oral)	<u>Yewen Pu</u> , Zachery Miranda, Armando Solar-Lezama, Leslie Kaelbling Selecting representative examples for program synthesis
UAI 2017	<u>Yewen Pu</u> , Leslie P Kaelbling, Armando Solar-Lezama Learning to acquire information
OOPSLA 2016 (workshop)	<u>Yewen Pu</u> , Karthik Narasimhan, Armando Solar-Lezama, Regina Barzilay sk_p: a neural program corrector for MOOCs
POPL 2013	Ali Sinan Koksai, <u>Yewen Pu</u> , Saurabh Srivastava, Rastislav Bodik, Jasmin Fisher, Nir Piterman

Synthesis of biological models from mutation experiments

OOPSLA 2011

Yewen Pu, Rastislav Bodik, Saurabh Srivastava

Synthesis of first-order dynamic programming algorithms

Preprints

arxiv 2023

Leonardo Hernandez Cano, Yewen Pu, Robert Hawkins, Josh Tenenbaum, Armando Solar-Lezama

Building Community Driven Libraries of Natural Programs

arxiv 2023

Saujas Vaduguru, Daniel Fried, Yewen Pu

Generating Pragmatic Examples to Train Neural Program Synthesizers

arxiv 2023

Yewen Pu, Saujas Vaduguru, Priyan Vaithilingam, Elena Glassman, Daniel Fried

Amortizing Pragmatic Program Synthesis with Rankings

arxiv 2023

Priyan Vaithilingam, Yewen Pu, Elena L Glassman

The Usability of Pragmatic Communication in Regular Expression Synthesis

arxiv 2023

Ruocheng Wang, Eric Zelikman, Gabriel Poesia, Yewen Pu, Nick Haber, Noah D Goodman

Hypothesis search: Inductive reasoning with language models