Michael B. James

hello@michaelbjames.com | michaelbjames.com | michaelbjames | @lambdalinguist

Research Interests

I am interested in *Programming Languages* in the context of *Program Synthesis* and *Human-Computer Interactions*. Languages and their tools are how programmers bridge the gap between their goal and their system's abilities. I work to make *usabilty* automatic program generation tools to bridge that gap, allowing programmers complete their task faster, safer, and more simply.

Education

University of California, San Diego
Ph.D., Computer Science, 2018-*present*.
M.S., Computer Science, 2021.
Advisor: Nadia Polikarpova
Fields: Programming Languages, Program Synthesis, Human-Computer Interactions

Tufts University
B.S., Computer Science, 2015.

Publications

Grounded Copilot: How Programmers Interact with Code-Generating Models. Shraddha Barke*, Michael B. James*, Nadia Polikarpova. *Under Review*. October 2022.

Program Recognition in Synthesis. Michael B. James, Nadia Polikarpova. *PLATEAU*. November 2021.

Digging for Fold: Synthesis-aided API Discovery for Haskell. Michael B. James, Zheng Guo, Ziteng Wang, Shivani Dosh, Hila Peleg, Ranjit Jhala, Nadia Polikarpova *OOPSLA*. November 2020.

Program Synthesis by Type-Guided Abstraction Refinement. Zheng Guo, Michael B. James, David Justo, Jiaxiao Zhou, Ziteng Wang, Ranjit Jhala, Nadia Polikarpova *47th ACM SIGPLAN Symposium on Principles of Programming Languages* (POPL 2020). January 2020.

Work Experience

Research Intern
Microsoft, Remote, Summer 2022
Mentors: Arjun Raghakrishna, Gustavo Soares

Software Engineer II
Jana Mobile, Boston, Massachusetts, Feb 2017 - Jun 2018

Software Engineer I
Uber Technologies, San Francisco, Jul 2015 - Dec 2016

Elm Intern
Prezi, Budapest, Hungary, Summer 2014
Mentor: Evan Czaplicki

*Equal Work

Talks

Program Recognition in Synthesis
2021 - PLATEAU 2021 (Carnegie Mellon University)

Digging for Fold: Synthesis-aided API Discovery for Haskell
2021 - OOPSLA 2021 (Chicago)
2020 - OOPSLA 2020 (virtual)

Component-based Type Driven Synthesis
2019 - University of California, San Diego

Teaching

Graduate Teaching Assistant
Fall 2023. UC San Diego.
Supervisor: Nadia Polikarpova
Course: graduate-level programming languages.

Graduate Teaching Assistant
Spring 2022, Spring 2021, Fall 2019. UC San Diego.
Supervisor: Nadia Polikarpova
Course: undergraduate intro-to-programming languages.

Undergraduate Teaching Assistant
Tufts University, Fall 2014
Supervisor: Kathleen Fisher
Course: undergraduate intro-to-programming-languages

Service

PLDI Student Volunteer Co-Chair 2023-24
PLDI Student Volunteer 2022
ICFP Artifact Evaluation Committee 2021
ICFP Artifact Evaluation Committee 2020