

Manish Shetty

Research Interests

Thesis Scaling Environments & Verifiers for Software Engineering Agents.

Topics Frontier Evals, Agents, AI for Software Engineering.

Education

- Aug'22–May'26 **University of California, Berkeley,**
Ph.D. in Computer Science.
GPA – 3.75/4.0, Committee: Koushik Sen, Ion Stoica, Joseph Gonzalez, Vincent Hellendoorn
- Aug'16–May'20 **PES University, Bangalore,**
B.Tech in Computer Science and Engineering (Honors).
GPA – 9.51/10.0, Advisor: Gowri Srinivasa

Publications

- NeurIPS' 25 **GSO: Challenging Software Optimization Tasks for Evaluating SWE-Agents.**
Manish Shetty, Naman Jain, Jinjian Liu, Vijay Kethanaboyina, Koushik Sen, Ion Stoica
Annual Conference on Neural Information Processing Systems, 2025
- COLM' 25 **R2E-Gym: Procedural Environment Generation and Training for SWE Agents.**
Naman Jain*, Jaskirat Singh*, Manish Shetty, Tianjun Zhang, Liang Zheng, Koushik Sen
Conference on Language Modeling, 2025
- ICML' 25 **Challenges and Paths Towards AI for Software Engineering (Position).**
Alex Gu, Naman Jain*, Wen-Ding Li*, Manish Shetty*, Yijia Shao, Ziyang Li, Diyi Yang, Kevin Ellis, Koushik Sen, Armando Solar-Lezama
International Conference on Machine Learning, 2025
- LLM4Code' 25 **Syzygy: Dual Code-Test C to Rust Translation using LLMs and Dynamic Analysis.**
Manish Shetty*, Naman Jain*, Adwait Godbole*, Sanjit Seshia, Koushik Sen
LLM4Code Workshop @ ICSE 2025
- MLSys' 25 **AIOpsLab: A Holistic Framework to Evaluate AI Agents for Autonomous Clouds.**
Yinfang Chen, Manish Shetty, Gagan Somashekhar, Minghua Ma, Yogesh Simmhan, Jonathan Mace, Chetan Bansal, Rujia Wang, and Saravan Rajmohan
Annual Conference on Machine Learning and Systems, 2025
- SoCC' 25 **Building AI Agents for Autonomous Clouds: Challenges and Design Principles.**
Manish Shetty, Yinfang Chen, Gagan Somashekhar, Minghua Ma, Yogesh Simmhan, Xuchao Zhang, Jonathan Mace, Pedro Las-Casas, Shachee Gupta, Suman Nath, Chetan Bansal, Saravan Rajmohan
ACM Symposium on Cloud Computing, 2025
- ICML' 24 **R2E: Turning any GitHub Repository into a Programming Agent Environment.**
Manish Shetty*, Naman Jain*, Tianjun Zhang, King Han, Koushik Sen, Ion Stoica
International Conference on Machine Learning, 2024
LLMAgents Workshop @ ICLR 2024
- Tech Report **LM Assertions: Computational Constraints for Self-Refining LM Pipelines.**
Arnav Singhvi*, Manish Shetty*, Shangyin Tan*, Chris Potts, Koushik Sen, M. Zaharia, O. Khattab
- Tech Report **CodeScholar: Growing Idiomatic Code Examples.**
Manish Shetty, Koushik Sen, Ion Stoica

- SoCC' 22 **How to Fight Production Incidents? An Empirical Study on a Large-scale Cloud Service.**
Supriyo Ghosh, [Manish Shetty](#), Chetan Bansal, Suman Nath
ACM Symposium on Cloud Computing, 2022
Best Paper Award 🏆
- FSE' 22 **AutoTSG: Learning and Synthesis for Incident Troubleshooting.**
[Manish Shetty](#), Chetan Bansal, Sai Upadhyayula, Arjun Radhakrishna, Anurag Gupta
Foundations of Software Engineering (Industry Track), 2022
- ICSE' 22 **DeepAnalyze: Learning to Localize Crashes at Scale.**
[Manish Shetty](#), Chetan Bansal, Suman Nath, Sean Bowles, Henry Wang, Ozgur Arman, Siamak Ahari
International Conference on Software Engineering, 2022
- ICSE' 21 **Neural Knowledge Extraction from Cloud Service Incidents.**
[Manish Shetty](#), Chetan Bansal, Sumit Kumar, Nikitha Rao, Nachiappan Nagappan and Tom Zimmermann
International Conference on Software Engineering - SEIP, 2021
Nominated for the IEEE Software Distinguished Paper Award (5/41) 🏆
Featured in VentureBeat, TechZine, etc. 🏆

Awards

- 2024 **Tong Leong Lim Pre-Doctoral Prize**, *EECS Department, UC Berkeley*.
- 2024 **Outstanding Graduate Student Instructor Award**, *EECS Department, UC Berkeley*.
- 2016-2020 **Prof CNR Rao Scholarship**, *CS Department, PES University*, (6x recipient).
- 2020 **Dr. MRD Merit Scholarship**, *CS Department, PES University*.

Experience

- May'25–Aug'25 **Google DeepMind**, *Research Intern*, Mountain View, California.
Topic: Post-training (RL) for Gemini's computer-use capabilities.
- May'24–Jul'24 **Microsoft Research**, *Research Intern*, Redmond, Seattle.
Topic: Frontier evals for LLMs on software deployment tasks.
- Jul'20–Jul'22 **Microsoft Research**, *Research Fellow*, Bangalore, India.
Topic: Scaling multi-task training for software crash analysis.
- Jan'20–Jun'20 **Microsoft Research**, *Research Intern*, Bangalore, India.
Topic: Training custom named-entity recognizers.
- Jul'19–Jun'20 **PES Center for Pattern Recognition**, *Research Assistant*, Bangalore, India.
Topic: ML models for sepsis prediction.

Academic Service

- ICML **2025 (PC)**.
- ICLR **2022 (PC), 2025 (PC)**.
- NeurIPS **2024 (PC), 2025 (PC)**.
- PLDI **2024 (Sub-Reviewer), 2024 (AE)**.
- SPLASH **2022 (Volunteer)**.
- ASE **2024 (PC)**.
- ISSTA **2022 (Sub-Reviewer), 2023 (Sub-Reviewer)**.
- MSR **2022 (Shadow PC), 2021 (Shadow PC)**.