

Alireza Hoseinpour

Ph.D. Student in Computer Science at the University of Illinois Chicago (UIC)

📍 Chicago, IL, USA — ✉ Email — 🔗 LinkedIn — 🌐 Website

Research Interests

- ◇ **Agentic AI for Software Engineering**
- ◇ **LLMs for Code and Software Repositories (AI4SE)**
- ◇ **Testing and Debugging AI Agents (SE4AI)**
- ◇ **Software Maintenance and Evolution**

Education

- ◇ **University of Illinois Chicago (UIC)**, IL, USA **Fall 2026 – Present**
Ph.D. in Computer Science
– *Advisor*: Dr. Austin Mordahl
- ◇ **Bowling Green State University (BGSU)**, OH, USA **Spring 2025 – Summer 2026**
M.Sc. in Computer Science
– *GPA*: 4.0/4.0
– *Advisor*: Dr. Abbas Heydarnoori
- ◇ **Sharif University of Technology (SUT)**, Tehran, Iran **Fall 2018 – Spring 2024**
B.Sc. in Computer Engineering
– *GPA*: 16.26/20 (last 6 semesters: 17.5/20)
– *Thesis Advisor*: Dr. Mahdiah Soleymani

Research Experience

- ◇ **Graduate Research Assistant, UIC** **Fall 2026 – Present**
Advisor: Dr. Austin Mordahl
– Conducting research at the intersection of agentic AI and software engineering.
- ◇ **Graduate Research Assistant, BGSU** **Spring 2025 – Summer 2026**
Advisor: Dr. Abbas Heydarnoori
– Co-developed **LinkAnchor**, an autonomous LLM-based agent for software traceability (**FSE 2026**).
– Led an empirical study of 500 AI-generated pull requests across 5 coding agents, building a taxonomy of test failures (**MSR 2026**).
– Fine-tuned open-source LLMs for automatic issue assignment (**LIA**, arXiv 2026).
– Investigated retrieval-augmented LLM reasoning for automated issue report classification.
- ◇ **Undergraduate Thesis Research, SUT** **Spring 2023 – Fall 2023**
Thesis Advisor: Dr. Mahdiah Soleymani
– Investigated the robustness of CNNs and Vision Transformers under distribution shifts from spurious correlations, conducting large-scale experiments with varied training strategies.
– Designed and implemented novel datasets with synthetic spurious signals to test generalization.

Publications

- ◇ **Peer-Reviewed**
 - **[FSE’26]** A. Akhavan*, **A. Hoseinpour***, A. Heydarnoori, H. Bagheri, and M. Keshani. “LinkAnchor: An Autonomous LLM-Based Agent for Issue-to-Commit Link Recovery.” *Proc. ACM Softw. Eng.*, Vol. 3, No. FSE, Article FSE184, 2026. DOI: [10.1145/3808191](https://doi.org/10.1145/3808191).
 - **[MSR’26]** **A. Hoseinpour**, S. Rezvani Boroujeni, J. T. Kunthavai, K. Cusimano, and A. Heydarnoori. “An Empirical Analysis of Test Failures in AI-Generated Pull Requests.” *Proc. 23rd International Conference on Mining Software Repositories (MSR), Mining Challenge Track*, pp. 939–943, 2026. DOI: [10.1145/3793302.3793606](https://doi.org/10.1145/3793302.3793606).
 - **[ECCV-W]** **A. Hoseinpour**, M. Taherkhani, F. HosseiniNoohdani, H. Asadollahzadeh, and M. Soleymani Baghshah. “Evaluating Robustness of Pre-Trained Deep Neural Networks Against Spurious Correlations.” *ECCV Workshop on Out-of-Distribution Generalization in Computer Vision (OOD-CV)*, Oct. 2023. [Paper](#).
- *Equal contribution.
- ◇ **Preprints**
 - A. Akhavan, E. Bartoli, A. Algharbi, **A. Hoseinpour**, I. Leite, and B. Donyanavard. “Yggdrasil: A Layer-First 3D Scene Graph for Real-Time Querying.” *arXiv preprint*, 2026. [arXiv:2609.38640](https://arxiv.org/abs/2609.38640).

- A. Khosravani, **A. Hoseinpour**, A. Akhavan, M. Keshani, and A. Heydarnoori. “LIA: Supervised Fine-Tuning of Large Language Models for Automatic Issue Assignment.” *arXiv preprint*, 2026. [arXiv:2601.01780](#).

Teaching Assistantships	<ul style="list-style-type: none"> ◇ BGSU: Software Engineering (Spring 2025) ◇ SUT: Computer Simulation, Database Design, Compiler Design (Spring 2023); Logical Circuits, Software Engineering Principles (Fall 2022)
Honors and Awards	<ul style="list-style-type: none"> ◇ 2nd Place, BGSU ACM Hackathon Apr 2025 Awarded for developing Pigniq, an emergency alert app designed to support users during panic attacks. Event details: Hackathon Website.
Industry Experience	<ul style="list-style-type: none"> ◇ Software Engineer at Digikala Sep 2022 – Apr 2024 Digikala is the largest e-commerce company in Iran with 40+ million users. <ul style="list-style-type: none"> – Developed scalable systems and real-time user interaction infrastructure to support high-traffic promotions. – Engineered software for two Black Friday events, with zero downtime and meeting commercial goals. – Technologies: PHP, Redis, Memcached, Kafka, MySQL, REST APIs, Jenkins, GitLab, Git, Scrum. ◇ Co-founder at AYOT Feb 2021 – Aug 2023 AYOT is an IoT platform for smart home appliances in partnership with SUT’s startup accelerator. <ul style="list-style-type: none"> – Developed the engine for cross-company IoT device interoperability. – Mentored interns from the Computer Engineering department. – Technologies: Python, FastAPI, PostgreSQL, Kafka, Redis, Docker, REST APIs, MQTT. ◇ Software Engineer at Tapsell Jan 2022 – Sep 2022 Tapsell is a leading AdTech company in Iran. <ul style="list-style-type: none"> – Designed and implemented Tapsell’s Creative Management Platform (CMP) product from scratch. – Technologies: Java, Kotlin, Spring Boot, Redis, MongoDB, PostgreSQL, REST APIs, Caffeine, Kubernetes, GitLab CI/CD, Maven, Git, JUnit, Mockito, Scrum. ◇ Software Engineer at Farazpardazan Feb 2019 – Sep 2019 Farazpardazan develops advanced digital solutions for banking, payments, and financial services. <ul style="list-style-type: none"> – Contributed to “Hamrah Novin”, the official mobile banking application of EN Bank. – Technologies: Java, Spring Boot, Hibernate, SQL.
Voluntary Experiences	<ul style="list-style-type: none"> ◇ “She’r ta Code” (First Edition), Sponsorship & Organizing Team Nov 2023 – Apr 2024 A spaghetti-code contest built around undefined behavior and compiler and architecture quirks.
Skills	<ul style="list-style-type: none"> ◇ Programming: Python, Java, Kotlin, C/C++, PHP ◇ Agentic AI & LLMs: LLM agents (tool use, function calling, autonomous planning), RAG, supervised fine-tuning, prompt engineering ◇ ML/DL: PyTorch, TensorFlow, Scikit-learn, Hugging Face Transformers ◇ Software & DevOps: Git, Docker, Kubernetes, Kafka, CI/CD (GitLab, Jenkins), REST APIs, Linux ◇ Databases: SQL, MongoDB, Redis, Memcached, Neo4j ◇ Languages: Persian (native), English (fluent, TOEFL iBT 104/120)
References	<ul style="list-style-type: none"> ◇ Dr. Austin Mordahl, UIC (Ph.D. Advisor) amordahl@uic.edu ◇ Dr. Mehdi Keshani, University of Zurich mehdi.keshani@uzh.ch ◇ Dr. Abbas Heydarnoori, BGSU (M.Sc. Advisor) aheydar@bgsu.edu ◇ Dr. Michael Decker, BGSU mdecke@bgsu.edu