AMIR MOHAMMAD FADAEI AYYAM

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INTERESTS

- Programming Languages
- Formal Methods
- Computer Systems

EDUCATION

M.Sc., Computer Engineering, Sharif University of Technology, GPA: 19.71/20   2023 – 2026 (expected)
Relevant Courses: Specification and Verification of Programs, Program Development from Formal Specifications, Verification of Reactive Systems, Theory of Distributed Systems

B.Sc., Computer Science, University of Tabriz, GPA: 16.91/20   2014 – 2019
Relevant Courses: Foundations of Logic and Set Theory, Operating Systems, Computer Architecture, Computer Networks

PUBLICATIONS

HITrees: Higher-Order Interaction Trees.
Amir Mohammad Fadaei Ayyam, Michael Sammler
Under review at CPP 26

RESEARCH EXPERIENCE

Research Intern – Institute of Science and Technology Austria (ISTA)   Jun, 2025 – Sep, 2025
Programming Languages and Verification Group (PLV)

- Mentor: Michael Sammler
- Developed HITrees, a higher-order version of interaction trees in Lean

Research Group Member – Sharif University of Technology   Oct, 2023 – Present
Distributed and Multiagent Systems Lab (DiSysLab)

- Advisor: Mohammad Izadi
- Thesis: Embedding Morgan's refinement calculus in the Rocq proof assistant.

HONORS AND AWARDS

Nationwide Masters Entrance Exam for Computer Engineering   Sep, 2023
Ranked 12th among more than 10,000 participants

SKILLS

Programming Languages   C#, Rust, C/C++, Python, Java, TypeScript/JavaScript
Theorem Provers   Rocq, Lean
Tools   Git, LaTeX

TEACHING EXPERIENCE

Teaching Assistant – Sharif University of Technology

- Program Development from Formal Specifications (40-684)   Spring, 2025
- Software Testing (40-828)   Spring, 2025
- Specification and Verification of Programs (40-745)   Fall, 2024
- Theory of Distributed Systems (40-661)   Fall, 2024

Teaching Assistant – University of Tabriz

- Advanced Programming (Java)   Spring, 2017
- Fundamentals of Programming (C)   Fall, 2015

OPEN SOURCE PROJECTS

Phork.Blazor.Reactivity   Jan, 2021 – Feb, 2021
- Developed an open-source library in C# that helps automating UI state management of WASM applications written in the ASP.NET Blazor framework
- Repository: GitHub, Available on: NuGet Package Manager

INDUSTRY EXPERIENCE

Backend Developer – SafarMood   Jan, 2020 – Aug, 2020
- Developed a RESTful API in C# for a Global Distribution System (GDS) aimed at aggregating and selling flight tickets
- Project was canceled due to the COVID-19 pandemic's impact on the travel industry

LANGUAGES

- Persian (native)
- English (fleunt)
  - TOEFL iBT: 99   Apr, 2019