

SHAHAB RAHIMIRAD

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SUMMARY

Passionate Ph.D. student in Computer Science with a strong foundation in machine learning, reinforcement learning, and probabilistic modeling. Actively researching language models within multi-agent environments, leveraging structured reasoning in probabilistic settings. Highly motivated to collaborate, publish impactful research, and contribute to advancements in Artificial General Intelligence.

EDUCATION

Purdue University

December 2027 (expected)

Ph.D. in Computer Science

GPA: 3.72/4.0

Related courses: Reinforcement Learning, Computer Vision, Large Language Models, Language Processing

Sharif University of Technology

August 2021

B.S. in Computer Engineering

GPA: 3.84/4.0

WORK EXPERIENCE

Software Engineer

Mar 2021 - Sep 2022

NuraFin Tech

Tehran, Iran

- Engineered a sophisticated Copy Trading bot that enabled real-time duplication of complex trading strategies, significantly enhancing client investment outcomes by streamlining their trading processes.
- Led a focused research team in developing machine learning algorithms and time-series forecasting for price analysis.

RESEARCH EXPERIENCE

PhD Researcher

Aug 2024 - Present

Supervisor: Prof. Joseph Campbell

Purdue University

- Designing LLM agents for multi-agent collaborative and competitive environments with deceptive and persuasive characteristics[1]

Bachelor's Thesis

Feb 2021 - Sep 2021

Supervisor: Dr. Hamid Beigy

Sharif University of Technology

- Title: Deep learning Part-of-Speech Tagger for Persian Language
- Analyzing and comparing different RNN methods including LSTM and GRU neural networks on a variety of different Corpora

PUBLICATIONS

- [1] **Shahab Rahimird**, G. Gergerli, L. Romero, M. L. Olson, S. Stepputtis, and J. Campbell, "Bayesian social deduction with graph-informed language models," in *NeurIPS Workshop on Efficient Reasoning*, 2025. [Online]. Available: <https://arxiv.org/abs/2506.17788>.

TEACHING EXPERIENCE

Graduate Teaching Assistant

Jan 2023 - Present

Purdue University

Courses: Data Engineering, Data Science, Web Information Search

Undergraduate Teaching Assistant

Jan 2019 - May 2021

Sharif University of Technology

Courses: Python Programming, Embedded Systems

SELECTED PROJECTS

Multi-Agent Theory-of-Mind

Apr 2025 - ongoing

Research Project

Purdue University

- Designing collaborative RL agents in the Overcooked environment by modeling Theory-of-Mind with Variational Inference

Concept Erasure in Personalized T2I Diffusion Models

Sep 2024 - Dec 2024

Research Project

Purdue University

- Implementing Erased Stable Diffusion and Evaluating the effects of BLIP personalization method on erased concepts.

E-learning System

Jun 2021 - Mar 2022

Backend Developer

Shahid Beheshti University

- Developed a Recommender system for educational content based on student profile, in collaboration with researchers from SBU.

Therapy Assistant

Apr 2020 - Sep 2020

FrontEnd Development

Shahid Beheshti University

- Developed React app for dynamic generation of Genogram trees using GoJS, in collaboration with Psychologists from SBU.

Microarray Data Analysis

May 2019 - Jun 2019

Intro. to Bioinformatics

Sharif University of Technology

- R program analyzing GSE48558 data to find genes related to Acute myeloid Leukemia using GEO2R, Biobase and limma libraries.

TALKS

Intel Labs Monthly Research Seminar

Jul 2025

Purdue Computer Science Graduate Research Symposium

Mar 2025

SKILLS

Programming Languages

Python, R, Java, JavaScript, Matlab, C,

ML Tools

Pandas, NumPy, TorchRL, Keras, Sklearn, Pytorch

Tools

Linux shell, SQL, MongoDB, Git, Huggingface