

Research Interest

I have a strong passion for leveraging machine learning to enhance automated reasoning and vice versa, as well as harmonizing the synergy between these two worlds.

Furthermore, I am deeply enthusiastic about developing problem-solving agents that harness the capabilities of both automated reasoning and machine learning across diverse domains. These domains encompass, but are not confined to, areas such as software engineering, board games (with a particular focus on chess), education, social science, mental health, and sports.

Education

M.Sc., Software Engineering, Tarbiat Modares University (TMU), Iran, GPA: 3.88/4.0, ranked 1st outstanding student 2019 - 2022

B.Sc., Software Engineering, Babol Noshirvani University of Technology (BNUT), Iran, GPA: 3.55/4.0 2014 - 2019

Relevant Experience

Research Assistant, Safety-Critical Software & Systems lab, TMU (Sep 2020 - Oct 2022)

- Did research under [Dr. Jalili](#)'s supervision on applied machine learning for software testing

Tutor, Faradars [\[link\]](#) (Jan 2021 - Mar 2021)

- Created and taught a C# course on Consuming Web Services

Web Developer Intern, Radman (Jul 2018 - Sep 2018)

- Developed a website using C#, ASP.NET Core, and SQL Server

Teaching Assistant, Advanced Programming course, BNUT (Feb 2017 - Jun 2017)

- Designed and oversaw a project, and delegated tasks to students

Software Developer Intern, Behineh System (Jul 2015 - Sep 2015)

- Developed a management software using C#, and SQL server

Selected Academic Projects *(see website for full list)*

Gross Domestic Product (GDP) Estimator 2023

- Estimating GDP in absence of historical GDP data using SMT solvers and machine learning clustering algorithms

Deep Emotion [\[link\]](#) 2021

- EEG-based emotion recognition using deep reinforcement learning

Harif - B.Sc Final Project [\[link\]](#) 2018

- A graph-based automatic course-selection software that recommends schedules based on students' preferences

Tati Studio 2017

- A compiler + IDE for [TSLANG](#).

Computer Skills

- **Highly skilled in Microsoft technologies**, with 6+ years of expertise in C#, SQL Server, ASP.NET Core, ML.NET, SignalR, and more
- **Highly experienced in data science tools**, with 3+ years of experience in Python, PyTorch, TensorFlow, LightGBM, Optuna, and more
- **Familiar with Z3, LLVM, Hugging Face, NLTK, PyG, Stable Baselines, PyGad, JavaScript, Java, C, R, Hadoop, Docker, Git, and more**

Languages

- **Persian - Native**
- **English - TOEFL iBT: Total 93, Reading 28, Listening 21, Speaking 22, Writing 22, April 01, 2023**

English Published Papers *(see website for under review papers, etc.)*

- [1] **T. Rostami, S. Jalili, "FrMi: Fault-revealing Mutant Identification using Killability Severity," Information and Software Technology, 2023 [\[link\]](#)**