**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**

**Research Experience**

**Researcher** **(Remote), Algorithms & Mathematics Group, University of Windsor (Oct 2023 - Present)**

* Conducting research under [Dr. Curtis Bright](https://cs.curtisbright.com/)’s supervision on solving mathematical problems using automated theorem provers

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

* Conducted research under [Dr. Saeed Jalili](https://scholar.google.com/citations?hl=en&user=j6gUwMkAAAAJ&view_op=list_works&sortby=pubdate)’s supervision on applied machine learning for software testing

**Teaching Experience**

**Tutor, Faradars** [[link]](https://faradars.org/courses/fvcs9907-web-services-using-c-sharp) **(Jan 2021 - Mar 2021)**

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

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

* Designed and oversaw a project and delegated tasks to students

**Work Experience**

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

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

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

* Developed management software using C# and SQL server

**Publications (English)**

* **T. Rostami**, S. Jalili, "FrMi: Fault-revealing Mutant Identification using Killability Severity," Information and Software Technology (Q1 Journal), 2023 [[link]](https://www.sciencedirect.com/science/article/abs/pii/S0950584923001623)

**Sample Code *(a more complete list is available on my Website, GitHub, and YouTube—links at the top of the CV)***

**MiniPyDPLL** [[link]](https://github.com/TahaRostami/MiniPyDPLL) **2024**

* Python implementation of the DPLL algorithm inspired by MiniSAT.

**Ligh-Gray Deep Learning** [[link]](https://github.com/TahaRostami/light_gray_deep_learning) **2024**

* Implementation of algorithms such as Word2Vec, LSTM seq. classification, Seq2Seq with attention, and Transformers with beam search decoding.

**Gross Domestic Product** **(GDP) Estimator 2023**

* Estimating GDP in the absence of historical GDP data using SMT solvers *(Z3)* and machine learning clustering algorithms

**Harif -** **B.Sc. Final Project** [[link]](https://github.com/TahaRostami/Harif) **2018**

* A software to automate the university enrollment process, leveraging graph modeling and randomized search algorithms to match student preferences.

**Relevant Computer Skills**

* **Programming Languages**: Python *(frequently used)*, C++ *(used occasionally)*, C# *(extensively used in the past)*, Java *(rarely used)*
* **Frequently Used Tools**: PySAT, SAT Solvers *(e.g., Mini-SAT, CaDiCaL)*, March\_cu *(look-ahead cube and conquer for SAT solving)*, cake\_lpr *(concurrent proof verification)*, NetworkX, PyTorch *(including relevant machine learning and deep learning toolkits)*
* **Familiar with**: Z3, nauty *(for isomorphism rejection)*, Hugging Face and LangChain *(for fine-tuning deep learning models and developing AI-powered applications)*, PyGad *(for nature-inspired search)*, Docker, and Git.

**Languages**

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

***References Available Upon Request***