**Education**

**M.Sc., Software Engineering, Tarbiat Modares University (TMU), Iran, GPA: 3.88/4.0 2019 - 2022**

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

**Work Experience**

**Research Assistant, Tarbiat Modares University Sep 2020 - Oct 2022**

* Developed innovative methods for predicting fault-revealing mutants, resulting in a 9% accuracy improvement
* Developed transfer learning-based methods that outperformed previous solutions in Mutant Selection and Prioritization by 67% and 4%
* Investigated predictive mutation testing and proposed a method that handles missing values with a 10% accuracy improvement
* Formulated two new problems in mutation testing: Dynamic Mutant Prioritization (DMP) and Dynamic Mutant Selection (DMS)
* Suggested concrete frameworks for future research on DMP and DMS

**Tutor, Faradars Company** [[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, purchased by around 250 students with very positive feedback

**Software Developer Intern, RADMAN Company Jul 2018 - Sep 2018**

* Customized RADMAN’s website template using Html5, CSS3, and Java Script
* Designed and Implemented a SQL server database for their website
* Implemented the website’s backend by C#, and ASP.NET Core

**Teaching Assistant, Babol Noshirvani University of Technology Feb 2017 - Jun 2017**

* Designed and oversaw a project for an Advanced Programming course, delegating tasks to 70 students
* Instructed C# by guiding students through multiple practice problems

**Software Developer Intern, Behineh System Company Jul 2015 - Sep 2015**

* Developed management software for a client using C#
* Designed and implemented a SQL Server database for the software
* Created a custom Persian calendar feature for the software

**Volunteer Work Experience**

* Identified potential issues in published research related to software engineering, contributing to scientific integrity, such as [[link]](https://pubpeer.com/publications/CD2EC044A365D6C3BA3DA300251AA9)
* Applied technical expertise to interdisciplinary domestic/international projects, ensuring timely completion, such as [[link]](https://taharostami.github.io/projects/2022-01-02-WHO.html) and [[link]](https://taharostami.github.io/projects/2021-01-12-TripadvisorWebScraper.html)
* Mentored 10 computer science, chess, and language students on study strategies, career development, and problem-solving techniques
* Assisted Farsi language learners on the HiNative platform, improving their speaking, writing, and comprehension skills [[link]](https://hinative.com/profiles/7532306)

**Publications**

**Scientific Journal/Working Papers**

* **T. Rostami**, S. Jalili, "Predicting useful mutants by fine-tuning the UniXcoder pre-trained model," in prep., 2023 [[link]](https://taharostami.github.io/publications/2023-01-02-jp2.html)
* **T. Rostami**, S. Jalili, "Predicting fault-revealing mutants based on mutant killing severity," submitted to Information and Software Technology, Under Review, 2023 [[link]](https://taharostami.github.io/publications/2023-01-01-jp1.html)
* **T. Rostami**, "An interpretable model for predicting non-trivial equivalent mutants of the MART," submitted to The Journal of Systems & Software, Under Review, 2023 [[link]](https://taharostami.github.io/publications/2023-01-03-jp3.html)

**Scientific Conference Papers**

* **T. Rostami**, S. Jalili, "A heuristic function for improving the prediction accuracy of fault revealing mutants," in 9th Iranian Joint Congress on Fuzzy and Intelligent Systems, 2022 [[link]](https://taharostami.github.io/publications/2022-03-04-cfis1.html)
* **T. Rostami**, S. Jalili, "A method for improving predictive mutation testing that considers the impacts of missing data," in 12th International Conference on Information and Knowledge Technology, 2021 [[link]](https://taharostami.github.io/publications/2021-12-14-ikt1.html)

**Non-Scientific**

* **T. Rostami**, "Navigating the Challenges of Studying Computer Science: A Guide for Students at Babol Noshirvani University of Technology," 2023 [[link]](https://taharostami.github.io/publications/2023-01-04-NITCSGuide.html)

**Last Undergraduate Projects**

**Harif -** **a graph-based automatic course-selection system that recommends schedules based on students’ preferences** [[link]](https://github.com/TahaRostami/Harif) **2018**

* Analyzed the curriculum published by the Ministry of Science and BNUT
* Formulated the core problem as MAX-SAT with a set of hard and soft constraints
* Designed and implemented a randomized algorithm for solving the problem that satisfies all hard constraints and maximizes a given objective function calculated based on soft constraints
* Designed and implemented efficient software using C# that provides all the above facilities with a modern and user-friendly interface

**NitPhoneBook - A phone book for BNUT** [[link]](https://github.com/TahaRostami/NitPhonebook) **2018**

* Specified the system’s requirements by conducting a series of interviews with BNUT’s administrators
* Analyzed the specified requirements and designed an architecture for the software
* Designed and implemented a recursive algorithm that satisfies one of the primary requirements of the system
* Designed and implemented a SQL server database of the system in collaboration with other members
* Designed and implemented a desktop application with a modern and user-friendly interface

**Relevant Awards**

* Outstanding student, ranked 1st at Computer Engineering Dept., TMU, Tehran, Iran, 2021

**Languages**

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

**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, MySQL, Docker, Git, and more

**References**

**Saeed Jalili, Associate Professor of Computer Science, TMU, sjalili@modares.ac.ir** [[g.scholar]](https://scholar.google.com/citations?hl=en&user=j6gUwMkAAAAJ) [[homepage]](https://www.modares.ac.ir/~sjalili)

**Ali Gholami Rudi, Assistant Professor of Computer Science, BNUT, gholamirudi@nit.ac.ir** [[g.scholar]](https://scholar.google.com/citations?user=gMfblzgAAAAJ&hl=en&oi=ao) [[homepage]](https://web.nit.ac.ir/~gholamirudi/)

**Hesam Omranpour, Assistant Professor of Computer Science, BNUT, h.omranpour@nit.ac.ir** [[g.scholar]](https://scholar.google.com/citations?user=0CBvqa8AAAAJ&hl=en&oi=ao) [[homepage]](https://member.nit.ac.ir/home.php?sp=391011)