Taha Rostami

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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

Research Assistant, TMU **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 and suggested concrete frameworks for future research on Dynamic Mutant Prioritization and Dynamic Mutant Selection

Teaching Experience

Tutor, Faradars Company [link] **Jan 2021 - Mar 2021**

- Created and taught a C# course on Consuming Web Services, purchased by more than 250 students with very positive feedback

Teaching Assistant, BNUT **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

Work Experience

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

- Customized RADMAN's website template using Html5, CSS3, and Java Script
- Designed and implemented the SQL server database and backend of RADMAN's website using C# and ASP.NET Core

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

Last Undergraduate Projects

Harif - A graph-based automatic course-selection system that recommends schedules based on students' preferences [link] **2018**

- Analyzed the curriculum published by the Ministry of Science and BNUT
- Formulated the core problem as an SAT problem with a set of hard and soft constraints
- Designed and implemented a randomized algorithm for solving the problem
- 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] **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

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, R, Hadoop, Docker, Git, and more

Publications

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

[2] **T. Rostami**, "Simpler machine learning models for predicting non-trivial equivalent mutants," The Journal of Systems & Software, Under Review, 2023 [link]

[3] **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]

[4] **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]

References

References Available Upon Request