Taha Rostami

Website | Youtube | Github | Linkedin | Visual CV | GScholar | Email: taha.rostami.darunkola@gmail.com

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'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's supervision on applied machine learning for software testing

Teaching Experience

Tutor, Faradars [link] **(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]

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

MiniPyDPLL [link] **2024**

- Python implementation of the DPLL algorithm inspired by MiniSAT.

Light-Gray Deep Learning [link] **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] **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