

# Taha Rostami

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Website | GitHub | LinkedIn | Google Scholar |

## Education

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- **Ph.D. in Software Engineering**, University of Luxembourg, Luxembourg, 2025–present.
- **M.Sc. in Software Engineering**, Tarbiat Modares University (TMU), Iran, 2019–2022. GPA: 3.88/4.0 (Ranked 1st, Outstanding Student).
- **B.Sc. in Software Engineering**, Babol Noshirvani University of Technology (BNUT), Iran, 2014–2019. GPA: 3.55/4.0.

## Publications

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- T. Rostami, C. Bright. *Queen Domination by SAT Solving*. arXiv preprint, submitted to journal, 2025. [arXiv]
- T. Rostami, S. Jalili. “FrMi: Fault-revealing Mutant Identification using Killability Severity.” *Information and Software Technology*, 2023. [link]

## Research Experience

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- **Research Assistant**, Security, Reasoning and Validation (SerVal), Interdisciplinary Centre for Security, Reliability and Trust (SnT), University of Luxembourg, Luxembourg, Jul 2025–present. Working under the supervision of Dr. Mike Papadakis on software testing.
- **Researcher (Project-based, Remote)**, Algorithms & Mathematics Group, University of Windsor, Canada, Oct 2023–Sep 2024; May 2025–Jul 2025. Conducted research under the supervision of Dr. Curtis Bright on solving mathematical problems using automated theorem provers.
- **Research Assistant**, Safety-Critical Software & Systems Lab, Tarbiat Modares University (TMU), Iran, Sep 2020–Oct 2022. Conducted research under the supervision of Dr. Saeed Jalili on applied machine learning for software testing.

## Teaching Experience

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- **Tutor**, Faradars (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.

## Work Experience

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- **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.

## Sample Code / Projects

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- **SAT Log** (2025) – Collection of problems solved using SAT solvers, including: Einstein’s Riddle, Rubik’s Cube, Wumpus World, Latin Square, Ramsey Number, and more.
- **MiniPyDPLL** (2024) – Simplified Python implementation of the DPLL algorithm, inspired by MiniSAT. Includes core components such as the watched-literal data structure.
- **Light-Gray Deep Learning** (2024) – LSTM, Seq2Seq with attention, Transformers with beam search decoding.
- **GDP Estimator** (2023) – GDP estimation using SMT solvers (Z3) and ML clustering.
- **Harif (B.Sc. Final Project)** (2018) – Automated university enrollment using graph modeling and a randomized search algorithm.

## Relevant Computer Skills

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- **Programming:** Python (frequent), SQL (extensive past), C++ (occasional), C# (extensive past), Java (rare).
- **Data Science Tools:** PyTorch, Hugging Face, LangChain, scikit-learn, XGBoost.
- **Automated Reasoning Tools:** PySAT, SAT Solvers (MiniSAT, CaDiCaL), Z3.
- **Other:** Docker, Git.

## Languages

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Persian (native), English (TOEFL iBT 93: R28/L21/S22/W22, Apr 2023).

## Selected Activities

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- **Chess:** Member of the Iranian Youth National Team (2010, 2012). Third place in Asian Championship Blitz (team event, 2012). Champion, Iranian Premier League (team event, 2012).
- **Calligraphy:** 1st place, City Competition, Babol, Mazandaran, Iran (2007).