Pooya Rostami Mazrae

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EDUCATION

University of Mons (UMONS)   Mons, Belgium
Ph.D. in Software Engineering, Advisor: Prof. Tom Mens   2021, Oct, 21 – Current

  – Thesis title: "Understanding the Evolution of GitHub Actions Automation Workflows"

Sharif University of Technology (SUT)   Tehran, Iran
M.S. in Software Engineering, Advisor: Dr. Abbas Heydarnoori, GPA: 18.30/20   2019, Sept, 1 – 2021, Sept, 20

  – Thesis title: "Automatic Linking of Issue Reports and Commits in Software Repositories"

K. N. Toosi University of Technology (KNTU)   Tehran, Iran
B.S. in Computer Engineering, Advisor: Dr. Ali Ahmadi, GPA: 17.64/20   2015, Sept, 1 – 2019, Jun, 20

  – Thesis title: "Deaf Disease Genes Detection Using Artificial Intelligence Tools"

RESEARCH EXPERIENCES

- **Research**
    - **2026, Jan, 6 - 2026, Apr, 4**: PhD Researcher @ SEL Lab @ University of Mons
    - **2021, Oct, 21 - 2025, Jan, 4**: PhD Researcher @ SEL Lab @ University of Mons
    - **2019, Oct, 1 - 2021, Sept, 20**: Master Student Researcher @ ISE Lab @ SUT
    - **2019, Jan, 1 - 2019, Aug, 1**: Research Internship @ IIPL @ KNTU

- **Mobility**
    - **2019, Oct, 1 - 2021, Sept, 20**: Visiting Researcher @ Radboud University

- **Organizations**
    - **2022, Apr, 10 - 2022, Sept, 21**: Workshop publicity chair for BENEVOL 2022

- **Academic Service**
    - Participating in peer review for Journal of Systems and Software (JSS)
    - **2025, Nov, 1 - 2026, Jan, 1**: Junior PC @ International Conference on Technical Debt (TechDebt 2026)

- **Talks**
    - **2023, Mar**: Presented qualitative research methodology in the form of a full-session lecture to master's students

TEACHING EXPERIENCES

- **Teaching Assistant**
    - **Feb, 2 - May, 24 of 2022, 2023, 2024, 2026**: **Software Evolution** To computer science **master** students @ Faculty of Sciences @ UMONS
    - **2020, Sept, 1 - 2020, Dec, 10**: **Data Science for Software Engineering** To Software Engineering **master** students @ Faculty of Sciences @ SUT
    - **2019, Jan, 10 - 2019, May, 20**: **Database Design** To Software Engineering **bachelor** students @ Faculty of Sciences @ SUT
    - **2018, Sept, 1 - 2018, Dec, 10**: **Data Structure** & **Database Design** (two separate courses) To Software Engineering **bachelor** students @ Faculty of Sciences @ KNTU

- **Master Students Defense**
    - **2024, Jun**: Attend as a jury member of Master Thesis defense

Professional Experiences

- **2025, Jan, 5 - 2026, Jan, 5**: Cloud Engineer/Data Analyst @ Necko Technologies

Selected Publications (Google Scholar Link)

1. **P. Rostami**, A Decan, T Mens, "gawd: A Differencing Tool for GitHub Actions Workflows", *Mining Software Repositories conference(MSR), 2024*, Tool's link: https://github.com/pooya-rostami/gawd
   https://doi.org/10.1145/3643991.3644873

2. M Wessel, T Mens, A Decan, **P. Rostami**, "The GitHub Development Workflow Automation Ecosystems", *Software Ecosystems: Tooling and Analytics, Book chapter, Springer Nature, 2023*,
   https://doi.org/10.1007/978-3-031-36060-2_8

3. **P. Rostami**, T Mens, A Decan, M Golzadeh, "On the usage, co-usage and migration of CI/CD tools: a qualitative analysis", *Empirical Software Engineering Journal (EMSE), 2023*,
   https://doi.org/10.1007/s10664-022-10285-5

4. A Decan, T Mens, **P. Rostami**, M Golzadeh, "On the Use of GitHub Actions in Software Development Repositories", *International Conference on Software Maintenance and Evolution(ICSME), 2022*,
   https://doi.org/10.1109/ICSME55016.2022.00029

5. **P. Rostami**, M Izadi and A. Heydarnoori, "Automated Recovery of Issue-Commit Links Leveraging Both Textual and Non-textual Data", *International Conference on Software Maintenance and Evolution(ICSME), 2021*,
   https://doi.org/10.1109/ICSME52107.2021.00030

Open Source Tools

- **gawd (GitHub Actions Workflow Differ) – Python**   2024
  Developed an open-source Python library and CLI tool to compute structural differences between GitHub Actions workflows, identifying added, removed, moved, renamed, or modified items with syntax-aware comparison.

Scholarships and Awards

- ICSME 2022 Distinguished Paper Award for "On the Use of GitHub Actions in Software Development Repositories". (https://cyprusconferences.org/icsme2022/)
- MSR 2022 best Hackathon Paper Award for "Bot detection in GitHub repositories". (https://conf.researchr.org/info/msr-2022/awards)

Certificate

- **"AWS Certified Solutions Architect – Associate"**   May, 2025
  Certificate link: https://www.credly.com/badges/0db7e80d-1a63-45da-9501-fe17a607f6cf
- **"AWS Certified Cloud Practitioner"**   Feb, 2025
  Certificate link: https://www.credly.com/badges/42d89f68-b12b-4b50-b38c-3f5fb79423bf
- **"The Power of Statistics" Coursera certificate**   Sep, 2023
  Certificate link: https://coursera.org/share/c0bad269d416082d0511e640cdc588b0

Technical Skills

- **Software Development Technologies & Methodologies:** Agile (Scrum), DevOps, IDEs (VS Code, IntelliJ, JupyterLab), testing framework (pytest), Git, Atlassian (Bitbucket, Jira), Docker, Linux/Unix
- **Coding:** Python, TypeScripts, Html, css
- **Database:** RDBMS such as MySQL, MS SQL
- **Data Analysis Libraries & Technologies:** Pandas, Keras, sci-kit learn, NumPy, NLTK, HuggingFace, PySpark
- **ML Algorithms:** Classical Machine learning, and deep learning algorithms (SVM, Random Forest, CNN, LLMs)
- **AWS:** S3, Glue, Athena, Lambda, Step Functions, RDS, Kinesis, QuickSight, etc.

Languages

English: Fluent   **French:** Intermediate Proficiency (B1 ongoing)   **Persian:** Native