

Mahdi Ali-Pour

Computer Engineering / Computer Science

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Academic Profile

PhD candidate in Computer Science at Sabanci University with +5 research experience and teaching assistant ship in Database systems, software engineering, computer science, and software testing. Former lecturer and current teaching assistant with a commitment to high-quality undergraduate education. Research interests include software testing, test automation, artificial intelligence, and large language model-based software engineering.

Education

- 2021–Present **PhD in Computer Science**, *Sabanci University*, Istanbul, Turkey
- 2019–2021 **Master of Science in Computer Science**, *Sabanci University*, Istanbul, Turkey
GPA: 3.48 / 4.00
- 2004–2009 **Bachelor of Software Engineering**, *Shomal University*, Amol, Iran
GPA: 15.14 / 20

Teaching and Academic Experience

- 2019–Present **PhD Researcher – Software Testing and AI**, *Sabanci University*, Istanbul, Turkey
 - Conducting doctoral research in software testing, test automation, and AI-assisted test generation.
 - Evaluating test quality using coverage, fault detection capability, and redundancy metrics.
- 2019–Present **Teaching Assistant**, *Sabanci University*, Istanbul, Turkey
 - Courses:** Data Structures, Machine Learning, Operating Systems, Database Systems, Mobile Application Development, C++ Programming
 - Assisted in teaching undergraduate Computer Science courses and delivering tutorials.
 - Prepared instructional materials, homework assignments, and exam questions.
 - Supervised student projects, conducted recitations, and graded coursework.
 - Provided academic support and mentoring to undergraduate students.
- 2012–2018 **Lecturer**, *Sabz Institute of Higher Education*, Iran
 - Course:** Software Engineering
 - Delivered lectures and led practical sessions for undergraduate students.
 - Designed course syllabus, lecture materials, exams, and grading rubrics.
 - Assessed student performance and supervised course projects.
 - Engaged students through interactive discussions and hands-on programming exercises.

Industry Experience

- 2018–2019 **Software Developer**, *Amard Company*, Iran
 - Developed and maintained software applications with a focus on quality and reliability.
 - Collaborated with cross-functional teams to design, test, and debug software systems.

Technical and Teaching Competencies

Programming Languages:	Python, C++, C#, Bash
Software Engineering & Testing:	Software testing, black-box testing, test case design, regression testing, boundary value analysis
Test Automation Tools:	Selenium, Appium
Testing Frameworks:	PyTest, unittest, JUnit, TestNG, Cucumber (BDD)
API Testing:	REST API testing, Postman, cURL-based testing, automated API tests
AI & Machine Learning:	LLM-based test generation, agentic AI systems, Scikit-learn, TensorFlow, PyTorch
Databases:	MySQL, MongoDB, Firebase
DevOps & Tools:	Git, GitHub Actions, Docker, Linux, Jira
Web & Mobile Technologies:	HTML, CSS, JavaScript, Android Studio, Flutter, Dart

Publications and Research Projects

ONGOING	Automated Software Test Case Generation Using Large Language Models
ONGOING	Reducing Covering Array Strength Leveraged from LLMs
ONGOING	GPU Application Fingerprinting Using Loop-Counting Attacks
ACCEPTED	Direction Estimation of Sound Sources Using Microphone Arrays and Signal Strength (ICSEng 2025)
Master Thesis	TestItAlready: A Code-Free Approach for Authoring Executable and Maintainable Mobile Application Test Cases

Teaching Interests

Software Engineering, Data Structures, Operating Systems, Database Systems, Software Testing, Machine Learning, Mobile Application

Languages

English	Fluent
Persian	Native
Turkish	Intermediate

Test Scores

YOKDİL (2021)	75
GRE (2018)	Quantitative: 158

Scholarships and Awards

2021–Present Full Master's and PhD Scholarship, Sabanci University, Turkey