

Reza Ahmadi

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Research Interests

Software Engineering, Program Analysis, Cybersecurity, Machine Learning, Deep Learning, Computer Vision, NLP

Education

University Of Verona

Verona, Italy

Master's degree in Computer Engineering

2023–2026

Specialization: Robotics and Smart Industry. Grade: 100/110.

Thesis: "Automated API Specification Inference from Network Traffic of Android Applications"

Shahab Danesh University

Qom, Iran

Bachelor's degree in Software Engineering

2016–2018

GPA: 16.78 / 20. Selected as 2nd Top Student in the Software Engineering department (2017).

Kashan Boys Technical College

Kashan, Iran

Associate degree in Software Engineering

2013–2015

GPA: 14.43 / 20.

Research Experience

Research Fellow (AI & Software Development)

Verona, Italy

University of Verona

Apr 2026–Present

Selected for a competitive research fellowship on the "FINAL LAP" project, externally funded by **Fondazione Cariverona**, under the supervision of Prof. Marco Cristani. Member of **INTELLIGO Labs** — AI for Materials (AI4M) research group.

- Designing and implementing AI-driven solutions spanning Physics-Informed Neural Networks (PINNs), Large Language Models (LLMs), and Computer Vision for intelligent material design.
- Developing full-stack software infrastructure to support research workflows, model training pipelines, and experimental evaluation.

R&D Software Engineer (Applied AI & Mobile)

Verona, Italy

Qualyco (University of Verona Spinoff)

Oct 2025–Mar 2026

- Engineered an applied computer vision solution for the **Benelli** manufacturing facility to optimize industrial warehouse operations.
- Designed and integrated a robust **Optical Character Recognition (OCR)** pipeline on Android edge devices to automate the tracking of high-precision components in real-time.

Research Fellow (Cybersecurity & IoT Systems)

Verona, Italy

University of Verona

Dec 2024–Jun 2025

Selected for a competitive, fully-funded research fellowship under the **iNEST** project, backed by the **European Union (NextGenerationEU)**.

- Conducted research on automated API specification inference from network traffic of Android applications (AndroidMITM) under Prof. Mariano Ceccato.
- Developed an automated massive testing framework on Docker and Podman with Python APIs and mitmdump.
- Automated testing processes for capturing and analyzing traffic via custom certificate integration on Android emulators.
- Configured Android SDK command-line tools for seamless network traffic interception and security audits.

Publications / Working Papers

2026: *Working Paper: Dynamic Inference of REST APIs from Android Network Traffic (Under Review)*

Reza Ahmadi, Sofia Mari, Michele Pasqua, Mariano Ceccato

Experience

Android Developer

Reply

Milan, Italy

Oct 2025–Jan 2026

- Contributed to the development and maintenance of UniCredit and Banco BPM banking applications.

Android Developer

Bale Messenger

Tehran, Iran

2020–2024

Bale is a banking messenger app serving over 15 million active users monthly.

- Revamped outdated modules and refactored 10,000+ lines of legacy code.
- Enhanced system memory performance by 40% and achieved 99% crash-free performance.
- Developed more than 10 new semi-major features and led performance optimization initiatives.

Android Developer

Basalam

Qom, Iran

2018–2020

Basalam is a marketplace with over 10 million users.

- Developed the application from scratch in 2 months, reaching 1 million users within 2 years.
- Awarded "Best Social Marketplace Application in Iran" (IWMF 2019).

Android Developer

MTN Irancell

Tehran, Iran

2017–2018

- Restructured codebase for maintainability and decreased technical debt by 20%.

Awards & Certificates

- The best social marketplace application of Iran (IWMF 2019) - Basalam
- 3rd Place in ACM Programming Competition, Shahab Danesh University (2017)
- IELTS (B2 Proficiency), IDP Education Ltd (2023)
- Android Development Professional Certificate, i3center (2016)

Skills

AI & Machine Learning: Machine Learning, Deep Learning, NLP, Computer Vision

Cybersecurity & Networking: Mobile Security Auditing, MITM Analysis, Network Traffic Analysis, mitm-proxy/mitmdump, API Security, SSL/TLS Interception

Mobile Development: Android Native Development, Android SDK, Jetpack Compose

Software Architecture & Principles: OOP, SOLID, Clean Architecture, Reactive Programming, Data Structures & Algorithms, Performance Optimization

Core CS: Bash/Shell Scripting, Databases (SQL, SQLite, MySQL, NoSQL)

Programming Languages: Java, Kotlin, Python, C++, JavaScript

DevOps & Tools: Linux/Unix Environment, Docker, Podman, Git, CI/CD Pipelines, Gradle, LaTeX

Testing: Automated REST API Testing, Unit/Integration Testing, UI Testing

Languages

English: B2 (Professional Working Proficiency - Master's degree conducted in English)

Italian: A2 (Elementary)

Persian: Native