

Mohammad Khalilzadeh

AI & GRC Researcher, Computer Engineer

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Research Interests

Artificial Intelligence, Trustworthy Machine Learning, AI Governance and Compliance Automation, Responsible AI Systems, and the intersection of Software Engineering and Machine Learning operations (MLOps). Particularly interested in developing verifiable, auditable, and regulation-aligned AI systems.

Education

Master of Science — Computer Engineering | *Expected: September 2026*

*Raja University – **19.52/20***

Thesis title: VerifyWise: An Open-Source Approach to Democratizing AI Governance and Regulatory Compliance

Advisor: Dr. Afsaneh Jalalian

Bachelor of Engineering — Computer Engineering | *2023*

University of Zanjan

Thesis title: Online location-based system for trading goods and services

Advisor: Dr. Ali Amiri

Research Experience

Graduate Researcher — AI Governance & Regulatory Compliance | *Expected: September 2026*

Raja University

- Conducted My Master's thesis under Dr. Afsaneh Jalalian on democratizing AI governance through open-source software based on VerifyWise.
- Designed and established the architecture and academic fundamentals of VerifyWise, a modular platform that maps EU AI Act, ISO 42001, ISO 27001, and NIST AI RMF requirements to executable compliance controls.

Graduate Researcher — AI Governance Platform Architecture, VerifyWise / BlueWave Labs | *June 2026*

Raja University & VerifyWise

- Investigated how to operationalize AI governance requirements in production software systems.
- Evaluated platform design against emerging regulatory frameworks and industry compliance practices.

Undergraduate Researcher — Deep Learning for Bioinformatics | *Oct 2022*

University of Zanjan

- Co-authored a conference paper presented at the 13th National Conference on Applied Research in Electrical and Computer Sciences and Biomedical Engineering (2022).

Undergraduate Researcher — Location-Based Systems & Mobile Computing | September 2022

University of Zanjan

- Conducted BEng thesis research under Dr. Ali Amiri on location-aware systems for trading goods and services.
- Designed a geospatial e-commerce architecture integrating real-time mapping, merchant matching, and cross-platform mobile delivery.

Publications

- **Khalilzadeh, M.** & Razavi, F. "VerifyWise: A Modular AI Governance Platform for Data-Driven Compliance Management" The Second International Interdisciplinary Conference on Artificial Intelligence (June 2026) – **First Author – Soon to be listed on IEEE as well**
- Safari, L., & Geranmayeh, H., & **Khalilzadeh, M.** "Prediction of Arginine Methylation Sites Using Deep Learning Methods" 13th National Conference on Applied Research in Electrical and Computer Sciences and Biomedical Engineering (October 2022)

Professional Experience

VerifyWise — Technical Leader | September 2024 – Present

AI governance and risk management platform | React, Node.js, PostgreSQL, Docker

- Lead architecture and development of VerifyWise, an open-source AI governance platform supporting EU AI Act, ISO 42001, ISO 27001 and NIST AI RMF compliance workflows.
- Designed data models and system architecture for model inventory, risk registers, vendor governance, evidence collection, and audit reporting.
- Defined and enforced engineering standards—code review guidelines, branching strategies, testing coverage thresholds, and documentation practices—that reduced defect rates and improved onboarding speed for new developers.

BlueWave Labs — Full-Stack Developer | May 2024 – September 2024

- Delivered performance-critical frontend features in React with focus on rendering optimization and accessible component design.
- Contributed to backend service development with consistent API contracts and test coverage.

Atrez-Sunex (Farasoo Fanavaran Farjad) — Full-Stack Developer | August 2023 – May 2024

- Engineered accessible UI components in React.js and optimized SQL Server query performance.
- Researched and proposed architectural improvements including test automation and modular service boundaries.

Roozbeh Charity (Registered NGO) — Full-Stack Developer | December 2022 – August 2023

- Designed and shipped accessible frontend experiences and RESTful backend services.
- Introduced automated testing and CI/CD pipelines adopted by the team.

TradeMaster — Founder & Technical Lead | 2020 – 2022

Location-based e-commerce platform | Vue.js, Flutter, Node.js, MongoDB, MySQL, Google Maps API

- Founded and architected a location-based e-commerce platform combining financial news, trading tools, and geolocation services.
- Shipped cross-platform mobile (Flutter) and web (Vue.js) applications; recruited and led a distributed engineering team.

Eadeh Pardaz Hooshman Sa'ee — Full-Stack Developer | 2019 – 2020

- Built cross-platform mobile applications with Flutter and dynamic web applications with React.js and Vue.js.
- Developed backend systems using ASP.NET and Node.js.

Technical Experience

AI / Machine Learning: Python, NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Keras, Jupyter, experiment tracking, model evaluation, data preprocessing

Software Engineering: React.js, Vue.js, Flutter, TypeScript, JavaScript, Node.js, Nest.js, Express.js, Django, ASP.NET, RESTful API design, microservices

Databases: PostgreSQL, MySQL, MongoDB, SQL Server, schema design, query optimization

DevOps / MLOps: Docker, GitHub Actions, CI/CD, Git, Linux, Nginx, automated testing

AI Governance & Compliance: EU AI Act, ISO 42001, ISO 27001, NIST AI RMF, risk assessment, model documentation, audit trails

Design & Collaboration: Figma, architecture decision records, code review, agile/remote team leadership

Certifications

Machine Learning Specialization – Stanford University (Coursera)

- Supervised Machine Learning: Regression and Classification
- Advanced Learning Algorithms
- Unsupervised Learning, Recommenders, Reinforcement Learning

Languages

Persian/Farsi: Native | English: Professional proficiency – IELTS: 6.5 – expired on 2025 | French: Beginner