Amin Milani Fard

CONTACT
INFORMATION

Address: Suite 180, 2985 Virtual Way, Vancouver, BC V5M 4X3, Canada

email: amilanif@nyit.edu | *web*: https://aminmf.github.io/

RESEARCH
INTERESTS

Trustworthy, Explainable, and Responsible AI

Software Analysis, Security, Testing, and Maintenance

Empirical Software Engineering, and Mining Software Repositories

Blockchain, Smart Contracts, and Distributed Applications

Data Science, Data Privacy, Information Retrieval

EDUCATION

The University of British Columbia (UBC), Vancouver, Canada

Ph.D., Electrical and Computer Engineering, May 2012 - Jan 2017

Thesis: Directed Test Generation and Analysis for Web Applications

Simon Fraser University (SFU), Burnaby, Canada

M.Sc., Computer Science, Jan 2009 - Dec 2010

Thesis: Clustering-based Web Query Log Anonymization

Ferdowsi University of Mashhad (FUM), Mashhad, Iran

B.Sc., Computer Engineering - Software, Sep 2003 - Jul 2008

Project: Agent-based Data Mining using Game Theory and Soft Computing

TEACHING
AND
RESEARCH
EXPERIENCE

Associate Professor and Program Coordinator, *College of Engineering and Computing Sciences, New York Institute of Technology*, Vancouver, Canada, Sep 2023 - Now

Assistant Professor, *College of Engineering and Computing Sciences, New York Institute of Technology*, Vancouver, Canada, Sep 2018 - Aug 2023

- Teaching: Secure Software Engineering, Algorithm Concepts, Data Mining, Data Center Security, Topics in Computer Security, Intrusion Detection and Hacker Exploit, Data Structures, Programming II.

- Supervising graduate students in Cybersecurity, Data Science, and Computer Science.

- Conducting research at the intersection of software engineering, cybersecurity, and artificial intelligence. Designing data-driven methods that enhance software reliability, strengthen security defenses, and improve automated decision-making.

- Program coordinator duties: supporting student admissions by processing course waiver applications and prerequisites assessments, new student orientation, course map design, and coordinating yearly program reviews and faculty peer-reviews in line with Continuous Program Improvement (CPI) requirements.

- Helping with program and curriculum development, faculty hiring, text analysis taskforce, students advising, industry connection, and course planning/adaptation for the new masters in Data Science and in Computer Science programs.

- Attending the Ministry of Advanced Education Degree Quality Assessment Board (DQAB) meetings for Computer Science and Data Science programs and the provincial reaccreditation of the Cybersecurity program. Attending the Organization Review meeting, the Ministry Annual Performance Review meeting, the External Program Review meeting. Helping with course planning and adaptation for the Master of Science in Data Science and Computer Science program proposals.

Adjunct Faculty, *College of Engineering and Computing Sciences, New York Institute of Technology*, Vancouver, Canada, Jan 2018 - Aug 2018
- Teaching prerequisite courses Data Structures and Algorithm, Programming I, and Programming II, for Master students in Cybersecurity.

Visiting Faculty, *MIS at Beedie School of Business*, SFU, Canada, May 2017 - Dec 2021
- Teaching (not on a regular basis) Business Systems Development and Business Analytics.
- Helped with the development of the Business Technology Management (BTM) program at SFU by creating the course outline and content for a new course, called Business Systems Development, for senior undergrads in BBA with MIS concentration.

Postdoctoral Researcher, *Toronto Metropolitan University (Ryerson University)*, Toronto, Canada, Mar 2017 - March 2018
- Conducting research on social media/network analysis with the focus on future links prediction at the Laboratory for Systems, Software and Semantics.

Research Assistant, *Software Analysis and Testing lab.*, UBC, Canada, 2012 - 2017
- Conducting research on automated techniques for web applications analysis and testing.
- Writing research grant proposal for my NSERC scholarship.
- Mentoring and supervising master students.

Research Associate, *Algorithms and Complexity Group*, SFU, Canada, 2011 - 2012
- Design and implementation of a courier scheduling system.
- Attending business sessions to discuss a MITACS project with the client.

Research Assistant, *Beedie School of Business*, SFU, Burnaby, Canada, March 2012
- Mining LinkedIn data for the project Mining Data on Open Source Software Community.

Instructor, *Columbia College*, Vancouver, Canada, Summer 2011
- Teaching Introduction to Computer Science and Programming I (Python).

Research Assistant, *Database and Data Mining Lab.*, SFU, Burnaby, Canada, 2009 - 2011
- Researching on protecting link privacy in social networks, clustering-based web query log anonymization, economical search modelling for P2P systems, and group discovery.

Teaching Assistant, SFU, Burnaby, Canada, Spring 2009 - Spring 2010 and Spring 2012
- *Beedie School of Business*: Business Data Management
- *School of Computing Science*: Data Structures and Algorithms, Introduction to Computer Science and Programming II (Java), Introduction to Multimedia and the Internet

Team leader/Researcher/Developer, *Ferdowsi University Software Simulation and Modeling Lab.*, Mashhad, Iran, 2005 - 2009
- Design and implementation of autonomous software agents and conducting AI research
- Team leader of Nexus Robocop soccer simulation team

Instructor, *Iranian Academic Center for Education, Culture and Research*, Mashhad, 2007-2008
- Teaching Software Engineering Lab., AI and Logic Programming, Algorithm Design.

Research Assistant/Developer, *Ferdowsi University Internship Center & Iran Khodro SAPCO Mfg.*, Mashhad, Iran, 2005
- Design and implementation of a surface roughness estimator for axial parts using image processing and neural networks.
- Attending technical meetings with Iran Khodro SAPCO Mfg. engineers.

Teaching Assistant, *Ferdowsi University of Mashhad*, Iran, Spring 2005 - Spring 2008
- Algorithm Design and Analysis, Artificial Intelligence, Database System Design, Compiler Design, Data Structures and Algorithms, Discrete Structures

INDUSTRY AND BUSINESS EXPERIENCE	**Technical Advisor**, *Shoptaki Inc.*, New York, US, Sep 2020 - Now

- Helping with the design and implementation of Smartchain, SmartID, and biometric applications, as well as patenting process.

Co-founder and Tech Lead, *InformedIn Inc.*, Vancouver, Canada, Dec 2018 - Jan 2023

- Design and implementation of IoT projects for intelligent monitoring and management of facilities (winner of the SFU Venture Connection Top Idea Prize for the Smart Parks Canada).

Co-founder and CEO, *AnalyticsBuffet Inc.*, Vancouver, Canada, July 2015 - May 2017

- Design and implementation of an automated testing and debugging tool for web applications.

- Applying for industrial grants, meeting with business clients and technical team, managing NRC-IRAP grant, training software engineering interns, product market validation, and financial management.

Technical Writer, *BeneFACT Consulting Group*, Toronto, ON, Canada, 2011 - 2013

- Producing technical reports for submission to the SR&ED tax credit program, identification and summarization of technological challenges in software development process.

Software Developer, *Intelligent Systems Co.*, Mashhad, Iran, 2002 - 2008

- Contributing in the design and implementation of different projects including management information system (MIS), official and industrial automation, transition controlling system, remote video monitoring systems, and content management system (CMS).

HONORS, AWARDS AND GRANTS	**NYIT-Vancouver Research Grant**, Vancouver, 2024-2025, Canada

Global Impact Research Grant, NYIT, New York, 2024-2025, USA

Most Influential Paper Award, The 23rd IEEE International Conference on Source Code Analysis and Manipulation (SCAM), 2023, Bogota, Colombia

Presidential Excellence Award Finalist in the Excellence in Teaching category, NYIT, 2023

NYIT-Vancouver Research Grant, Vancouver, 2021-2022, Canada

Best Paper Award, The 41st European Conference on Information Retrieval (ECIR) 2019, Cologne, Germany

Global Faculty Research and Creativity Grant, NYIT, New York, 2019, USA

Teaching Excellence Recognition, SFU, 2018, Burnaby, Canada

Best Paper Award Nominee, The 10th IEEE International Conference on Software Testing, Verification and Validation (ICST) 2017, Tokyo, Japan

NRC Industrial Research Assistance Program (IRAP) Grant, ($40,000) National Research Council Canada 2016, Vancouver, Canada

ACM SIGSOFT CAPS Grant Award, ($1,800 USD) ACM, 2014 and 2015

NSERC Alexander Graham Bell Canada Graduate Scholarship (CGS-D), ($105,000) Natural Sciences and Engineering Research Council of Canada, 2013-2016, Vancouver, Canada

NSERC Postgraduate Scholarship, ($21,000) 2013, Vancouver, Canada

Four Year Fellowship (FYF) Award, ($22,000) UBC, 2012, Vancouver, Canada

Faculty of Applied Science Graduate Award, ($4,000) UBC, 2012-13, Vancouver, Canada

International Partial Tuition Scholarship, ($1,066) UBC, 2012, Vancouver, Canada

Graduate Fellowship Award, ($6,250), SFU, 2010, Burnaby, Canada

Additional Scholarship, Offered $3000 more than the school's standard financial support for master students, 2009, SFU, Burnaby, Canada

2nd place, Khwarizmi National Robotics Competition, 2008, Tehran, Iran

4th place, IEEE Robotics Competition, 2008, Rio de Janeiro, Brazil

9th place, RoboCup International Robotics Competition, Soccer Simulation, 2007, Atlanta, US

19th place, Asia Regional ACM ICPC Programming Contest, 2007, Tehran, Iran

5th place, BICup: Business Intelligence Data Mining Challenge, 2006, Santiago, Chile

Exceptional Talents Admission Award, Entering university without taking national universities entrance exam, FUM, 2003, Mashhad, Iran

Research Medal, National Research Inst. for Science Policy, Ministry of Science, 2002, Iran

Laureate of the Khwarizmi Award (1st Rank), Awarded by Iran's President Mohammad Khatami for outstanding achievement in research and innovation in science and technology (5 golden coins), Khwarizmi Young Festival, 2002, Tehran, Iran

PUBLICATIONS **Google Scholar Profile: Citations:** 2003, **h-index: 20**, **i10-index: 25** (February 2026)

Top-tier: ICSE x 2, ASE x 2, EMSE, ICST, ICSME, DSN, ISSRE, EDBT, ECIR, DSAA, WWW J., Knowl. Based Syst.

1. M. Kuutila, P. Ralph, H. S. Qiu, R. de Souza Santos, M. Choetkiertikul, A. Milani Fard, R. Alkadhi, X. Devroey, G. Robles, H. Hata, S. Baltes, V. Kovalenko, S. Chakraborty, E. Tuzun, H. Arif, G. Adisaputri, K. Garcés, A. S. L. de Andrade, E. Amedzor, B. Ayoola, K. Gaspard-Chickoree, A. Hoseyni. (2026) *The Software Infrastructure Attitude Scale (SIAS): A Questionnaire Instrument for Measuring Professionals' Attitudes Toward Technical and Sociotechnical Infrastructure*, *48th IEEE/ACM International Conference on Software Engineering* (ICSE), Rio de Janeiro, Brazil, 2026.

2. M. Kuutila, P. Ralph, H. S. Qiu, R. de Souza Santos, M. Choetkiertikul, A. Milani Fard, R. Alkadhi, X. Devroey, G. Robles, H. Hata, S. Baltes, H. Arif, V. Kovalenko, S. Chakraborty, E. Tuzun, G. Adisaputri. (2026) *Staying or Leaving? How Job Satisfaction, Embeddedness and Antecedents Predict Turnover Intentions of Software Professionals*, *48th IEEE/ACM International Conference on Software Engineering* (ICSE), Rio de Janeiro, Brazil, 2026.

3. C. Huang, X. Huang, A. Milani Fard. (2026) *Are AI-assisted Development Tools Immune to Prompt Injection?*, *arXiv preprint arXiv:2603.21642*, 2026.

4. C. Huang, X. Huang, A. Milani Fard. (2026) *Auditing MCP Servers for Over-Privileged Tool Capabilities*, *arXiv preprint arXiv:2603.21641*, 2026.

5. C. Huang, X. Huang, N. Tran, A. Milani Fard. (2026) *Model Context Protocol Threat Modeling and Analyzing Vulnerabilities to Prompt Injection with Tool Poisoning*, *arXiv preprint arXiv:2603.22489*, 2026.

6. A. Peik, M. A. Zare Chahooki, A. Milani Fard, M. Agha Sarram. (2025) *Adaptive Temporal Fusion Transformers for Cryptocurrency Price Prediction*, *arXiv preprint arXiv:2509.10542*, 2025.

7. C. Lin, A. Milani Fard. (2025) *A Context-Aware LLM-Based Action Safety Evaluator for Automation Agents*, *38th Canadian Conference on Artificial Intelligence* (Canadian AI), Calgary, Canada, 2025.

8. S. Anbaee Farimani, M. Vafaei Jahan, P. Soltani, A. Milani Fard. (2025) *Financial Market Prediction using Contrastive Learning-based News Representation and Multi-Resolution Market Data*, *38th Canadian Conference on Artificial Intelligence* (Canadian AI), Calgary, Canada, 2025.

9. A. Peik, M. A. Zare Chahooki, A. Milani Fard, M. Agha Sarram. (2025) *Enhancing Cryptocurrency Price Prediction by Applying Temporal Fusion Transformers*

on Subseries, *38th Canadian Conference on Artificial Intelligence* (Canadian AI), Calgary, Canada, 2025.

10. X. Li, S. Dong, A. Milani Fard. (2025) ***Enhancing User Experience with Visual Controls for Local Differential Privacy***, *Journal of Cybersecurity and Privacy*, 5(3), 36, 2025.

11. K. Lin, H. Cao, A. Milani Fard. (2025), ***Browser Fingerprint Detection and Anti-Tracking***, *arXiv preprint arXiv:2502.14326*, 2025

12. A. Peik, M. A. Zare Chahooki, A. Milani Fard, M. Agha Sarram. (2024), ***Leveraging Time Series Categorization and Temporal Fusion Transformers to Improve Cryptocurrency Price Forecasting***, *arXiv preprint arXiv:2412.14529*, 2024.

13. V. Kambhampati, N. H. Mohammed, A. Milani Fard. (2024), ***Characterizing JavaScript Security Code Smells***, *arXiv preprint arXiv:2411.19358*, 2024

14. S. Anbaee Farimani, M. Vafaei Jahan, A. Milani Fard. (2024), ***An Adaptive Multimodal Learning Model for Financial Market Price Prediction***, *IEEE Access*, vwol. 12, pp. 121846-121863, 2024.

15. M. Abbasnezhad, A. Jahangard Rafsanjani, A. Milani Fard. (2024), ***Deep Reinforcement Learning-based Exploration of Web Applications***, *International Journal of Information and Communication Technology Research*, 16(2), 25-33. 2024.

16. F. Ahmadi Abkenari, A. Milani Fard, S. Khanchi. (2023), ***Hybrid Machine Learning-Based Approaches for Feature and Overfitting Reduction to Model Intrusion Patterns***, *Journal of Cybersecurity and Privacy*, 3(3), 544-557. 2023

17. H. Zhou, A. Milani Fard, A. Makanju. (2022), ***The State of Ethereum Smart Contracts Security: Vulnerabilities, Countermeasures, and Tool Support***, *Journal of Cybersecurity and Privacy*, 2(2), 358-378. 2022.

18. S. Anbaee Farimani, M. Vafaei Jahan, A. Milani Fard. (2022) ***From Text Representation to Financial Market Prediction: A Literature Review***, *Information* 13, no. 10: 466. 2022.

19. S. Anbaee Farimani, M. Vafaei Jahan, A. Milani Fard, R. K. Tabbakh. (2022) ***Investigating the Informativeness of Technical Indicators and News Sentiment in Financial Market Price Prediction***, *Knowledge-Based Systems*, Elsevier, Vo. 247, 108742. 2022.

20. A. Piran, C. Chang, A. Milani Fard. (2021) ***Vulnerability Analysis of Similar Code***, *21st IEEE International Conference on Software Quality, Reliability and Security* (QRS), Hainan Island, China, 2021. [*61/243=25% acceptance rate*]

21. S. Anbaee Farimani, M. Vafaei Jahan, A. Milani Fard, G. Haffari. (2021) ***Leveraging Latent Economic Concepts and Sentiments in the News for Market Prediction***, *8th IEEE International Conference on Data Science and Advanced Analytics* (DSAA), Porto, Portugal, 2021, pp. 1-10. [*59/262=22.5% acceptance rate*]

22. Z. Alamatian, M. Vafaei Jahan, A. Milani Fard. (2021) ***Using Market Indicators to Eliminate Local Trends for Financial Time Series Cross-Correlation Analysis***, *34th Canadian Conference on Artificial Intelligence* (Canadian AI), Vancouver, Canada, 2021.

23. P. Ralph, S. Baltes, G. Adisaputri, R. Torkar, V. Kovalenko, M. Kalinowski, N. Novielli, S. Yoo, X. Devroey, X. Tan, M. Zhou, B. Turhan, R. Hoda, H. Hata, G. Robles, A. Milani Fard, R. Alkadhi. (2020) ***Pandemic Programming: How COVID-19 affects software developers and how their organizations can help***, *Empirical Software Engineering Journal* (EMSE), 25:4927-4961, Springer, 2020. ✰Also in the Journal-First track of the 43rd International Conference on Software Engineering (ICSE), 2021 ✰

24. S. M. Fattahi, A. Makanju, A. Milani Fard. (2020) **SIMBA: An Efficient Simulator for Blockchain Applications**, *50th IEEE/IFIP International Conference on Dependable Systems and Networks* (DSN), Valencia, Spain, 2020. [*48/291=16.5% acceptance rate*]

25. A. Milani Fard, E. Bagheri, K. Wang. (2019) **Relationship Prediction in Dynamic Heterogeneous Information Networks**, *41st European Conference on Information Retrieval* (ECIR), Cologne, Germany, 2019, pp. 1-16. [*39/165=23% acceptance rate*] � Best Paper Award✯

26. A. Milani Fard, A. Mesbah. (2017) **JavaScript: The (Un)covered Parts**, *10th IEEE International Conference on Software Testing, Verification and Validation* (ICST), Tokyo, Japan, 2017, pp. 230-240. [*36/135=26% acceptance rate*] ✯Best Paper Award Nominee✯

27. A. Milani Fard, A. Mesbah, E. Wohlstadter. (2015) **Generating Fixtures for JavaScript Unit Testing**, *30th IEEE/ACM International Conference on Automated Software Engineering* (ASE), Lincoln, NE, 2015, pp 190-200. [*60/289=20% acceptance rate*] ✯Editor Select paper in IEEE Internet Computing, March 2016.✯

28. A. Vahabzadeh, A. Milani Fard, A. Mesbah. (2015) **An Empirical Study of Bugs in Test Code**, *31st IEEE International Conference on Software Maintenance and Evolution* (ICSME), Bremen, Germany, 2015, pp 101-110. [*32/148=21% acceptance rate*]

29. A. Milani Fard, K. Wang. (2015) **Neighborhood Randomization for Link Privacy in Social Network Analysis**, *The World Wide Web Journal* (WWW), Springer, January 2015, Volume 18, Issue 1, pp 9-32.

30. A. Milani Fard, M. Mirzaaghaei, A. Mesbah. (2014) **Leveraging Existing Tests in Automated Test Generation for Web Applications**, *29th ACM/IEEE International Conference on Automated Software Engineering* (ASE), Vasteras, Sweden, 2014, pp 67-78. [*55/276=19% acceptance rate*]

31. A. Milani Fard, A. Mesbah. (2013) **Feedback-Directed Exploration of Web Applications to Derive Test Models**, *24th IEEE International Symposium on Software Reliability Engineering* (ISSRE), 2013, Pasadena, CA, pp 278-287. [*46/131=35% acceptance rate*]

32. A. Milani Fard, A. Mesbah. (2013) **JSNose: Detecting JavaScript Code Smells**, *13th IEEE International Conference on Source Code Analysis and Manipulation* (SCAM), 2013, Eindhoven, The Netherlands, pp 116-125. ✯Most Influential Paper Award in 2023✯

33. A. Milani Fard, K. Wang, P. S. Yu. (2012) **Limiting Link Disclosure in Social Network Analysis through Subgraph-Wise Perturbation**, *15th International Conference on Extending Database Technology* (EDBT), Berlin, Germany, ACM Publication, pp 109-119. [*43/193=22% acceptance rate*]

34. A. Milani Fard. (2012) **Privacy Preserving Web Query Log Publishing: A Survey on Anonymization Techniques**, Technical report, *Computing Research Repository*, arXiv preprint arXiv:1211.2354.

35. A. Milani Fard, K. Wang. (2010) **An Effective Clustering Approach to Web Query Log Anonymization**, *5th International Conference on Security and Cryptography* (SECRYPT), Athens, Greece, 2010, IEEE publications, pp 1-11. [*22/164=13% acceptance rate*]

36. A. Milani Fard, M. Ester. (2009) **Collaborative Mining in Multiple Social Networks Data for Criminal Group Discovery**, *12th IEEE International Conference on Computational Science and Engineering* (CSE), Vancouver, BC, 2009, pp 582-587. [*20% acceptance rate*]

37. A. Milani Fard. (2009) **Competitive-Cooperative Automated Reasoning from Distributed and Multiple Source of Data**, in *Data Mining and Multiagent Integration*, Editor: Long-bing Cao, Springer US, pp. 279-290.

38. J. A. Nasiri, A. Milani Fard, et al. (2009) **High Dimensional Problem Optimization using Distributed Multi-agent PSO**, *3rd European Symposium on Computer Modeling and Simulation* (EMS), Athens, Greece, 2009, IEEE Computer Society, pp. 245-250.

39. H. Tabatabaee Yazdi, A. Milani Fard, M. Akbarzadeh –T., (2008) **Cooperative Criminal Face Recognition in Distributed Web Environment**, *6th IEEE International Conference on Computer Systems and Applications* (AICCSA), Doha, Qatar, 2008, pp 524-529. [*112/404=27% acceptance rate*]

40. M. A. Rigi, A. Milani Fard, M. Akbarzadeh –T. (2008) **Finding Optimal Grid Dimension for Partitioning Linguistic Variables of Fuzzy Concepts**, *International Journal of Mathematics and Computer Science*, V3, N2. pp 141-150.

41. R. Ghaemi, A. Milani Fard, H. Tabatabaee, and M. Sadeghizadeh. (2008) **Evolutionary Query Optimization for Heterogeneous Distributed Database Systems**, *International Journal of World Academy of Science, Engineering and Technology*, V. 19, pp 43-49.

42. A. Milani Fard, H. Kamyar, M. Naghibzadeh. (2008) **Multi-expert Disease Diagnosis System over Symptom Data Grids on the Internet**, *World Applied Sciences Journal*, Vol. 3 No. 2, pp 244-253.

43. A. Milani Fard, V. Salmani, M. Naghibzadeh, et al. (2007) **Game Theory based Data Mining Technique for Strategy Making of a Soccer Simulation Coach Agent**, *6th International Conference on Information Systems Technology and its Applications* (ISTA), Kharkiv, Ukraine, Lecture Notes in Informatics, pp 54-65. [*17/99=17% acceptance rate*]

44. M. A. Rigi, A. Milani Fard, M. Akbarzadeh –T. (2007) **An Evolutionary Data Mining Model for Fuzzy Concept Extraction**, *IEEE International Conference on Innovations in Information Technology* (IIT), Dubai, UAE, 2007, IEEE publications, pp 257-261.

45. M. Mohebbi, M. Akbarzadeh –T., A. Milani Fard. (2007) **Microorganism DNA Pattern Search in a Multi-agent Genomic Engine Framework**, *World Applied Sciences Journal*, V. 2 No. 6. Also a poster in *International Conference on Bioinformatics* (InCoB'07).

46. Milani Fard, A., Kahani, M., Ghaemi, R., Tabatabaee, H. (2007) **Multi-agent Data Fusion Architecture for IntelligentWeb Information Retrieval**. *International Journal of Intelligent Systems and Technologies*, Vol 2 N.3, pp. 201-205.

47. A. Milani Fard, R. Ghaemi, M. Akbarzadeh –T., H. Akbari. (2007) **Kavosh: An Intelligent Neuro-Fuzzy Search Engine**, *7t IEEE International Conference on Intelligent Systems Design and Application* (ISDA), Rio de Janeiro, Brazil, 2007, pp. 597-602.

48. A. Milani Fard, A. Deldari, H. Deldari. (2007) **Quick Grammar Type Recognition: Concepts and Techniques**, *International Conference on Compilers, Related Technologies and Applications* (CoRTA), Covilha, Portugal, 2007, pp 51-61.

49. M. Mozafari, A. Milani Fard, V. Salmani, M. Naghibzadeh. (2006) **An Improved Fuzzy Mechanism for 3D Soccer Simulation Agent's Shoot Skill** Annual *IEEE India Conference*, New Delhi, India, 2006.

50. S. T. Zargar, M. H. Yaghmaee, A. Milani Fard. (2006) **Fuzzy Proactive Queue Management Technique**, Annual *IEEE India Conference*, New Delhi, India, 2006.

51. A. A. Akbari, A. Milani Fard, A. Goodarzvand Chegini. (2006) **An Effective Image Based Surface Roughness Estimation Approach Using Neural Network**, *World Automation Congress* (WAC'06), July 2006 , Budapest, Hungary

52. A. Milani Fard, H. Akbari, M. Akbarzadeh –T. (2006) **Fuzzy Adaptive Resonance Theory for Content-Based Data Retrieval**, *IEEE International Conference on Innovations in Information Technology* (IIT), Dubai, UAE, 2006, pp 1-5.

53. V. Salmani, A. Milani Fard, M. Naghibzadeh (2006) , ***A Fuzzy Two-Phase Decision Making Approach for Simulated Soccer Agent***, *IEEE International Conference on Engineering of Intelligent Systems* (ICEIS), Islamabad, Pakistan, 2006

54. A. Milani Fard, M. -R. Akbarzadeh –T, F. Varasteh –A (2006), ***A New Genetic Algorithm Approach for Secure JPEG Steganography***, *IEEE International Conference on Engineering of Intelligent Systems* (ICEIS), Islamabad, Pakistan, 2006

PRESENTATIONS, TALKS, AND GUEST LECTURES

1. ***Bridging the Gap: Aligning Our Curriculum with Job Market Demands Using AI***, Staff & Faculty Development Day, NYIT, Vancouver, Nov 2025

2. ***The Future of Cybersecurity in a World of AI and Quantum Computing***, Cybersecurity Day Panel, NYIT, Vancouver, Oct 2025

3. ***Source Code Analysis Tools: Research and Practice***, DevFest Vancouver Tech Talk, Google Developer Group, NYIT, Vancouver, Nov 2023

4. ***JSNose: Detecting Code Smells in JavaScript***, The *Most Influential Paper Award* invited talk, IEEE International Conference on Source Code Analysis and Manipulation, Bogota, Colombia, Oct 2023

5. ***Actionable Graph Mining: Privacy-Preserving Data Publishing, Recommender Systems, and Program Analysis***, Toronto Metropolitan University (Ryerson University), Toronto, March, 2018

6. ***Hybrid Analysis and Test Generation for Web Applications***, Ferdowsi University of Mashhad (FUM), Aug, 2017

7. ***Directed Test Generation for Web Applications***, UBC, Vancouver, Oct, 2016

8. ***Directed Model Inference for Analysis of Web Applications***, FUM, Oct, 2015

9. ***Automating Web Application Testing and Analysis***, FUM, Nov, 2013

10. ***Search-based Software Engineering***, FUM, May, 2012

11. ***Privacy-Preserving Data Mining and Publishing***, FUM, Oct, 2010

ACTIVITIES AND SERVICES

Organizing Committee:
Responsible AI Track at the Canadian Conference on Artificial Intelligence (Canadian AI), 2026

Program Committee:
IEEE/ACM International Conference on Software Engineering (ICSE), 2027
IEEE/ACM International Conference on Automated Software Engineering (ASE), 2026, 2025, 2024
IEEE/ACM International Conference on Program Comprehension (ICPC), 2022, 2021
IEEE International Conference on Data Science and Advanced Analytics (DSAA), 2022
The Genetic and Evolutionary Computation Conference (GECCO), 2021, 2020, 2019
International Conf. on Advances in System Testing and Validation Lifecycle (VALID), 2019, 2018
International Conf. on Intelligent, Secure and Dependable Systems in Distributed and Cloud Environments (ISDDC), 2018
IEEE International Conference on Intelligent Systems Design and Application (ISDA), 2007

Reviewer:
Expert Systems with Applications, Elsevier, 2026, 2024
ACM Transactions on Software Engineering and Methodology (TOSEM), 2025
IEEE Transactions on Knowledge and Data Engineering (TKDE), 2025
IEEE Access, 2025
Computer Science Review, 2025
Journal of Systems and Software (JSS), Elsevier, 2024, 2021, 2019, 2014

IEEE Transactions on Neural Networks and Learning Systems (TNNLS), 2023
Financial Innovation, Springer, 2024, 2023
Empirical Software Engineering Journal (EMSE), Springer, 2023
Scientific Reports, Springer Nature, 2023
Machine Learning with Applications, Elsevier, 2023
Cryptography Journal, MDPI, 2023
Automated Software Engineering, Springer, 2021
Computers & Security, Elsevier, 2019
ACM/IEEE International Conference on Software Engineering (ICSE), 2017, 2016
ACM SIGSOFT Symposium on the Foundations of Software Engineering (FSE), 2017
Information Systems (IS), Elsevier, 2017
The Working Conference on Mining Software Repositories (MSR), 2016
ACM Transactions on Knowledge Discovery from Data (TKDD), 2015
IEEE Transactions on Software Engineering (TSE), 2014

IEEE International Conference on Software Maintenance and Evolution (ICSME), 2014
International World Wide Web Conference (WWW), 2013
IEEE International Conference on Software Testing, Verification and Validation (ICST), 2012
IEEE Working Conference on Reverse Engineering (WCRE), 2013, 2012
IBM International Conference of the Centre for Advanced Studies (CASCON), 2012
ACM International Conference on Information and Knowledge Management (CIKM), 2010
IEEE International Conference on Social Computing, (SocialCom), 2010, 2009
IEEE/WIC/ACM International Conference on Web Intelligence, (WI), 2010
IEEE International Conference on Data Mining (ICDM), 2009
IEEE International Conference on Innovations in Information Technology (IIT), 2006

Advising, Supervision, Mentoring, Thesis Defense Committee, Industry/Academy Reviewer:

- Supervising and mentoring over 200 students for their master's projects at New York Tech - Vancouver, 2018 - Now

- Advising PhD students out of NYIT and serving as PhD thesis external examiner, 2019-Now

- Swiss National Science Foundation (SNSF) application reviewer: 2026 (collaborative proposal), 2023 (Postdoc Fellowship proposal)

- KU Leuven (University of Leuven, Belgium) Research Council C1 funding reviewer, 2026

- Mitacs Accelerate research proposal reviewer, 2019

- Advising and mentoring 3 master's students, Software Analysis and Testing Lab, UBC, Canada, 2012 - 2017

SUPERVISED / ADVISED / MENTORED / EXAMINED MASTERS AND PHD THESES AND PROJECTS

Software Engineering:

- Hidden-Web Induced by Client-Side Scripting: An Empirical Study (Master's Thesis Mentor, 2013)

- Performance Improvements in Crawling Modern Web Applications (Master's Thesis Mentor, 2014)

- Code Smells in Cascading Style Sheets: An Empirical Study and a Predictive Model (Master's Thesis Mentor, 2014)

- Characterizing and Refactoring Asynchronous JavaScript Callbacks (Master's Thesis Mentor, 2015)

- A Study of Bugs in Test Code and a Test Model for Analyzing Tests (Master's Thesis Mentor, 2016)

- Mining and Characterizing Cross-Platform Apps (Master's Thesis Mentor, 2016)

- Mining Human Written Test Cases to Generate New Test Cases for Similar Applications (Master's Project Supervisor, 2019)

- Web Application Testing Using Deep Reinforcement Learning (Ph.D. Thesis Advisor, 2024)

Data Science:

- Link Prediction in Dynamic Weighted Heterogeneous Social Networks (Ph.D. Thesis Examiner, 2021)

- An Adaptive Multimodal Learning Model Based on Behavior of Investors for Financial Market Price Prediction (Ph.D. Thesis Advisor, 2022)

- Prediction of Stock Markets Using Artificial Intelligence Algorithms (Ph.D. Thesis Examiner, 2023)

- Detecting AI-Generated Text (Master's Project Supervisor, 2023)

- Enhancing the Stability and Performance of MobileNetV3 for Face Anti-Spoofing (Master's Project Supervisor, 2023)

- Intelligent Cryptocurrency Trader Based on Attention Mechanism using Time Series Categorization (Ph.D. Thesis Advisor, 2025)

Cybersecurity (Software/Systems/Data/AI Security and Privacy):

- An Empirical Study on Security Issues with Java Test Code in Practice (Master's Project Supervisor, 2018)

- Implementation of an Air Gap Covert Channel (Master's Project Supervisor, 2018)

- Empirical Study of Computer Viruses (Master's Project Supervisor, 2018)

- An Empirical Study on Vulnerability in Similar Code (Master's Project Supervisor, 2019)

- A Machine Learning Approach to Distributed Denial of Service Attack using XDP and eBPF (Master's Project Supervisor, 2019)

- Privacy-Preserving IoT Data Publishing (Master's Project Supervisor, 2019)

- NoSQL Injection Detection and Prevention (Master's Project Supervisor, 2019)

- Vulnerability Analysis of RFID-Based Systems (Master's Project Supervisor, 2019)

- Adding Support and Access Control Management in NFV Environment (Master's Project Supervisor, 2019)

- Demonstration of Inter-VM attack on OpenStack (Master's Project Supervisor, 2019)

- SIMBA: An Efficient Simulator for Blockchain Applications (Master's Project Co-Supervisor, 2020)

- Android Vulnerabilities Detection using Crowdsourcing (Master's Project Supervisor, 2020)

- An Empirical Study on Vulnerabilities in Python Projects (Master's Project Supervisor, 2020)

- Implementation and Performance Analysis of the Post-Quantum VPN (Master's Project Supervisor, 2020)

- The State of Ethereum Smart Contracts Security: Vulnerabilities, Countermeasures, and Tool Support (Master's Project Supervisor, 2021)

- Design and Implementation of Identity and Access Management Services (Master's Project Supervisor, 2021)

- Security Testing in Progressive Web Applications (Master's Project Supervisor, 2021)

- Adversarial Attack using Generative Adversarial Networks (Master's Project Supervisor, 2021)

- Design and implementation of a secure loyalty/reward system based on blockchain (Master's Project Supervisor, 2021)

- Automation Threat Hunting and Web Vulnerability Detection Tools (Master's Project Supervisor, 2021)

- CodeSecure: A Just-In-Time Vulnerability Detector IDE Plugin (Master's Project Supervisor, 2021)

- Quantum-resistant endpoints encryption using KYBER (Master's Project Supervisor, 2021)

- Malware Analysis and Classification (Master's Project Supervisor, 2021)

- Security Analysis on IoT Devices (Master's Project Supervisor, 2021)

- Fake Profiles Detection (Master's Project Supervisor, 2022)

- Security Vulnerabilities in Progressive Web Applications (Master's Project Supervisor, 2022)

- Verification of Performance of Decentralized Nodes Based On Forked Consensus-based Blockchain (Master's Project Supervisor, 2022)

- Web-based Cryptojacking Detection Based On Network Traffic With Google Puppeteer (Master's Project Supervisor, 2022)

- API Security Analytics (Master's Project Supervisor, 2022)

- Cloud Automated Security Audit (Master's Project Supervisor, 2022)

- An Extension for Detecting Vulnerabilities in VSCode (Master's Project Supervisor, 2022)

- A Recommendation System for Secure Software Development (Master's Project Supervisor, 2022)

- CI/CD Pipeline Vulnerabilities Analysis and Mitigations (Master's Project Supervisor, 2023)

- Enhancing Security in WebAssembly through Code Analysis and Runtime Isolation (Master's Project Supervisor, 2023)

- Hybrid Machine Learning-Based Approaches for Feature and Overfitting Reduction to Model Intrusion Patterns (Master's Project Supervisor, 2023)

- Limitations Analysis of Penetration Testing Tools (Master's Project Supervisor, 2023)

- Implementation of a Lightweight security monitoring system for microservices (Master's Project Supervisor, 2023)

- Exploring the Vulnerabilities of Verilog Code (Master's Project Supervisor, 2023)

- Detecting JavaScript Security Code Smells (Master's Project Supervisor, 2023)

- Transformer-based IoT Attacks Detection (Master's Project Supervisor, 2023)

- Implementation of a Homomorphic Encryption System (Master's Project Supervisor, 2023)

- Assessing the Safety of Automation Agent Actions: A LLM-Based and Context-Awareness Safety Evaluator (Master's Project Supervisor, 2024)

- Behavior-Based Host-based Intrusion Detection System Utilizing eBPF Technology (Master's Project Supervisor, 2024)

- Diagnosing DDoS attacks in SIP-based services and Mitigation (Master's Project Supervisor, 2024)

- Detecting Malicious Mining Activities on Web Browsers (Master's Project Supervisor, 2024)

- Implementation of FGSM-based Adversarial Attack and Defence Technique (Master's Project Supervisor, 2024)

- Graphical enhancement of IDS with Suricata through Elasticsearch and Kibana (Master's Project Supervisor, 2024)

- Ensuring Data Integrity and Consistency in Open Government Data: A Comprehensive Guideline to Verification Techniques and Privacy Protection (Master's Project Supervisor, 2024)

- Authentication System based on ECG Signal (Master's Project Supervisor, 2024)

- Header-based SMS Spam Detection (Master's Project Supervisor, 2024)

- Deepfakes Detection and Media Integrity Verification (Master's Project Supervisor, 2024)

- Enhancing User Experience with Visual Controls for Local Differential Privacy (Master's Project Supervisor, 2024)

- A Lightweight DDoS Detection Framework with Real-time Traffic Simulation (Master's Project Supervisor, 2024)

- Detecting AI-synthesized Voices in Text-to-Speech and Voice Conversion Systems (Master's Project Supervisor, 2024)

- An Empirical Analysis of Recurring Python Vulnerabilities in Single Package Development (Master's Project Supervisor, 2024)

- Browser Fingerprint Detection and Anti-Tracking (Master's Project Supervisor, 2024)

- Malicious Browser Extensions: Vulnerabilities, Risks and Mitigations (Master's Project Supervisor, 2024)

- Assessing Security Risks and Vulnerabilities in Docker Containerized Environments (Master's Project Supervisor, 2024)

- A Hybrid AI Browser Extension for Information Fact-Checking (Master's Project Supervisor, 2025)

- Online Game Threat Modeling Analysis and Security Mitigation (Master's Project Supervisor, 2025)

- AI-Assisted Malware Behavior Analysis (Master's Project Supervisor, 2025)

- Post Quantum Cryptography Implementation on the TLS Protocol (Master's Project Supervisor, 2025)

- Model Context Protocol Security: Prompt Injection and Tool Poisoning Analysis (Master's Project Supervisor, 2025)

- Enhancing Kubernetes Services Availability and Security Through Predictive Autoscaling (Master's Project Supervisor, 2025)

- Implementation and Analysis of RAG on LLMs for Malware Detection and Explanation (Master's Project Supervisor, 2025)