AMIR ALI POUR | PhD

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EXPERIENCE

- **École de Technologie Supérieure | Cloud-to-Edge laboratory [🌐]** *Sept 2023 - present*
  Postdoctoral Researcher Montreal, Quebec, Canada
  - Exploring new research tracks on the combination of machine learning and distributed systems.
  - Exploring Federated Learning from Security and Distributed Systems perspective.
  - Building a new research platform for FL on a large fleet of heterogeneous machines connected via MQTT.

- **SGS-Brightsight [🌐]** *Feb 2023 - Sept 2023*
  Hardware Security Evaluator Delft, The Netherlands
  - Evaluating embedded system security using Side-Channel Analysis techniques.
  - Identifying and reporting vulnerabilities through EM and Power side channels.

- **Grenoble Alpes University | LCIS laboratory [🌐]** *Oct 2019 - Dec 2022*
  Research and Teaching Assistant Valnce, Rhone Alpes, France
  - Modeling evaluation of Physically Unclonable Functions (PUF) with Machine Learning.
  - Numerical Simulation of Cryptographic systems with MATLAB and python.
  - Embedded System Programming with embedded C.
  - Hardware Design with VHDL on FPGAs.
  - Published several IEEE journal and conference papers.
  - Paper presentation at several conferences such as ISVLSI, ISQED, and ICCAD.

- **Clemson University | IS-WIN lab [🌐]** *Nov 2021 - March 2022*
  Visiting PhD Student and Researcher Clemson, South Carolina, USA
  - Modeling evaluation of Physically Unclonable Functions (PUF) with Machine Learning.
  - Designed a Cryptographic algorithm using PUF and ML.
  - Numerical Simulation of Cryptographic systems with MATLAB and python.
  - Published a conference paper accepted in ISVLSI 2022.
  - Organized the TEPN workshop for DCOSS 2022 conference.

- **Grenoble INP | LCIS laboratory [🌐]** *Feb 2019 - Jul 2019*
  Research Intern Valence, Rhone Alpes, France
  - Deep Learning based Side Channel Analysis of AES algorithm.
  - Studyed the Differential power analysis based on machine learning.
  - Published an IEEE conference paper accepted in DATE 2020 conference.

- **Karina Mobile Solutions** *2016 - 2017*
  Video Game Developer (Part-time) Tehran, Iran
  - Gameplay Programming and Editor development on Unity3D
  - Porting and Testing Video Games for Android Platform

- ***Spooky Guys* Indie Game Development Team** *2011 - 2012 & 2013 - 2015*
  Founder and Technical Lead Tehran, Iran
  - Gameplay Feature Design and Development
  - Level Design Tools Development (Spooky2D)

- **Medrick Game Studio** *2012 - 2013*
  Video Game Developer (Part-time) Tehran, Iran
  - Mobile Video Game Development on Unity3D

Education

- **Grenoble Alpes University** *Oct 2019 - Dec 2022*
  PhD in Nanoelectronics and Nanotechnology Valence, France
  - Dissertation: PUF Utilization with Machine Learning for Resource Constrained Cyber-Physical Systems
  - Advisors: Dr. David Hely, Prof. Vincent Beroulle, Dr. Giorgio Di Natale

- **Grenoble INP** *Sept 2018 - Sept 2019*
  Master in Embedded Systems Security and Trust Valence, France
  - Internship: Side Channel Analysis of AES encryption using deep learning
  - Advisor: Dr. David Hely

- **Azad University of Tehran (South branch)** *Sept 2011 - Sept 2016*
  Bachelor of Science in Computer Software Engineering Tehran, Iran
  - Project: Procedural Content generation for 3D environment design using Unity3D

Teaching and Supervision

- **Grenoble INP Esisar [🌐]** *2019 - 2022*
  Valence, Rhone Alpes, France
  - Taught a class on theories of Physically Unclonable Function.
  - Lab instructor of Realtime Operating Systems course.
  - Lab instructor of System on Chip course.
  - Lab instructor of Side Channel Analysis course.
  - Lab instructor of Hardware design with VHDL course.
  - Supervisor of a project for the innovative project campaign in 2019 comprising three graduate students.
  - Supervisor of two undergraduate projects comprising a total of four undergraduate students.
  - Developed teaching materials, quizzes, and projects for a class on theories of Physically Unclonable Functions. The materials were contributions also to a European project called EMNESS.

Skills

- **Programming Languages:** Python, C#.Net, C++, MATLAB, JavaScript
- **Data Science & Machine Learning:** Pytorch, Tensorflow, Hugging Face, Weights&Biases
- **Edge/Cloud Technologies:** MQTT, Docker, Kubernetes
- **DevOps & Version Control:** Github
- **Specialized Area:** Hardware design with VHDL
- **Mathematical & Statistical Tools:** MATLAB
- **Other Tools & Technologies:** Unity3D

Honors and Awards

- **Scholarship of Excellence** *Oct 2019*
  Grenoble Alpes University
  - Awarded a scholarship of Excellence from IDEX to pursue my PhD studies at Grenoble Alpes University

- **Scholarship of Excellence** *Sept 2018*
  Grenoble INP
  - Awarded 8000 € scholarship of Excellence from IDEX to pursue my master's program in Grenoble INP

PROFESSIONAL SERVICE

- **Student lead Organizer** *November 9 - 11, 2020*
  Applied research Competition, Cybersecurity Awareness Weekend (CSAW) in Europe [🌐]
  - Part of the committee in selecting and evaluating competition candidates
  - Organized Poster and Technical presentations

- **Student co-lead Organizer** *November 9 - 11, 2021*
  Applied research Competition, Cybersecurity Awareness Weekend (CSAW) in Europe [🌐]
  - Part of the committee in selecting and evaluating competition candidates
  - Organized Poster and Technical presentations

- **Web chair** *May 30 - June 02 2022*
  Workshop on Test and Evaluation of Programmable Networks, DCOSS conference [🌐]
  - Developed and maintained a website for the workshop

- **TPC member** *January 6 - 10 2025*
  Workshop on Machine Intelligence in Networked Data and Systems (MINDS), COMSNETS conference [🌐]
  - Part of the committee to review scientific papers.

- **TPC member** *July 20 - 23 2025*
  Workshop on Engineering Techniques for Distributed Computing Continuum Systems (EDCCS), ICDCS conference [🌐]
  - Part of the committee to review scientific papers.

- **Co-Organizer** *May 5 - 9 2025*
  Colloqium on the Synergie between software engineering and Artificial Intelligence, 92nd Acfas Congeres [🌐]
  - Part of the committee in selecting and evaluating keynote presentations nad posters for the colloquim.
  - Handling the Logistics and organization of the colloquim.

- **Peer Reviewer** *2021 - present*

  - Computer Networks
  - Sustainable Computing: Informatic and Systems
  - Journal of Cloud Computing
  - IEEE Access
  - COMSNETS MINDS workshop
  - ICDCS EDCCS workshop
  - INFOCOM
  - IEEE WCNEE
  - Ad-Hoc Networks
  - IEEE COINS

CERTIFICATIONS

- **MITX :** EDX verified Machine Learning with Python-From Linear Models to Deep Learning*December 2020*

ADDITIONAL INFORMATION

Languages: Persian (Mother Language), English (Fluent), French (Intermediate)
Interests: Machine Learning, Distributed Computing, Data Privacy, Computer Security, Constrained Systems