Sayeh **GHOLIPOUR PICHA**

Researcher | Ph.D. Student

eXplainable AI (XAI), Computer Vision, Natural Language Processing (NLP)

GIPSA-Lab, Grenoble INP University Grenoble, France

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Professional Skills

Development Skills Python, Pytorch, Tensorflow, Transformers, Matlab, Linux, Git, Azure, C.

Research Skills Pattern Recognition, Semantic Segmentation, Natural Language Processing, LaTeX.

Education

2022 - Present **Ph.D. in Computer Vision**, University of Grenoble INP, GIPSA-Lab, France.

- **Thesis title :** How to trust Deep Learning-based system predictions?
- **Supervisors :** Dr. Dawood AL CHANTI, Prof. Alice CAPLIER.

eXplainable AI (XAI) | Computer Vision | NLP | Medical Image Processing

2021 - 2022 **M.Sc. in Signal and Image Processing**, University of Grenoble INP, France.

- **Scholarship Student.**
- **GPA :** 14.82/20.
- **Thesis title :** How far generated data can improve Neural Networks' performance?
- **Supervisors :** Prof. Alice CAPLIER, Dr. Dawood AL CHANTI.

Deep Learning | GANs | CNN | Tensorflow | Pytorch | Facial Expression Recognition

2020 - 2021 **M.Sc. in Data Science, Linking Experiment to Theory**, University of Grenoble INP, France.

- **GPA :** 14.59/20.
- **Thesis title :** Guiding Human percept of an ambiguous moving plaid by the Random Dot Kinematograms and Bistable moving plaids
- **Supervisors :** Dr. Ronald PHLYPO, Prof. Alan CHAUVIN.

Cognition Image Processing | Psychopy Library (Python)

2012 - 2016 **B.Sc. in Electrical Engineering - Telecommunication**, Shiraz University, Iran.

- **GPA :** 16.95/20
- **Thesis title :** Review project on Steganography in Images and Implementation of the methods.
- **Supervisors :** Alireza Keshavarz Hadad.

Cyber Security | Matlab | Image Processing

Publications

- Gholipour Picha, S.; Al Chanti, D. and Caplier, A. (2023). How far Generated Data Can Impact Neural Networks Performance?. In Proceedings of the 18th International Joint Conference on Computer Vision, Imaging and Computer Graphics Theory and Applications - Volume 5 : VISAPP, ISBN 978-989-758-634-7; ISSN 2184-4321, pages 472-479. DOI : 10.5220/0011629000003417

Professional Experience

January 2018 – June 2020 | **Research & Development Member,** Farabina Smart Company , Babol, Iran

Developing a thermal camera-based device for non-destructive water leak detection.

- Developed a module to detect pipes' cracks and fractures inside a wall with a thermal camera in my role as a junior developer.
- Thermal camera (Flir) image processing and Python programming on Raspberry Pi 3.
- Led to patent registration.

Thermal Image Processing | Python | Raspberry pi3 | Junior Developer

March 2017 – December 2017 | **Data Analyst,** iRoad Electronic Ariya Company , Tehran, Iran

Online traffic counter systems, camera systems, and road data collection systems in urban roads and suburban areas.

- Processed and analyzed data received periodically via GSM containing cars' average speed, traffic counter, and license plate recognition, etc.
- Implemented a SQL module to retrieve and send the processed data to the national road and transportation organization.

MySQL | GSM | Junior Data Processor

September 2014 – September 2016 | **Part-time job, Asia-Tech, Shiraz, Iran**
Junior Software and Hardware Engineer, testing the new network equipment for Shiraz university establishment.
- Assist in the installation of new network equipment and provide IT support to university dormitories.
- Support and troubleshoot students' software issues.

Linux | Junior Software Engineer

Teaching Experience

2023-2024 | **Deep Learning Project Course, Presentation on how to use the university's server infrastructure for GPU training, 3rd year Engineering Program**
Phelma Grenoble INP University
Python | Shell

2022-2023 | **Data Analysis Course, Lab Assistance Professor, 2nd year Engineering Program**
Phelma Grenoble INP University
PSD | Matlab

Competitions

Data Challenge competition for Automatic No-Reference Image Sharpness Assessment in Infrared Images June 2021
Lynred | Project Description
Lynred is a company specializing in the development of advanced infrared detectors. Master's students participated in this competition to measure their performance in various objective and subjective problem-solving fields. We were accepted by the contest jury and the company itself with our newly developed algorithm..
Infrared Image Processing | Python | Matlab | Team Working

Language Skills

English ●●●●○
French ●●●○○
Persian ●●●●●
Japanese ●○○○○

Strengths

- Problem-solving
- Analytic Skills
- Adaptability
- Perseverance and commitment

Certifications

November 2023 AutoML Fall School at LMU Munich
July 2023 Bumblekit Machine Learning Summer School in Healthcare and Biosciences at ETH Zürich.
June 2022 Giving a speech at Gdr ISIS Face, gestures, actions, and Behavior seminar at Sorbonne University.
Feb 2022 Facial Expression Recognition with Keras Course Certificate
2021 - 2022 Granted Persyval Full Scholarship for 2nd year of master's study in France.
June 2019 Programming Fundamentals course from Duke university Certificate
Feb 2017 Machine Learning course from Stanford University presented by Andrew Ng.

Volunteering Experience

2023 - Present Exchange and IT Volunteer IAESTE France
2014 - 2015 Chief of IEEE council, Branch of Shiraz University.
2013 - 2014 Financial Manager at IEEE council, Branch of Shiraz University.
2014 Academic Student Association : CST, ADS, and Altium Workshops facilitator.

References

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