Meryem Janati Idrissi

College of Computing   email
Ben-Guérir, Morocco   Linkedin

Research Interests

My research interests revolve around intrusion detection applied into the field of distributed systems, with an emphasis on federated learning specifically network intrusion detection systems. The goal of my work is to bridge the gap between the two domains as well as enhance federated learning algorithms.

Education

Mohammed VI Polytechnic University   Oct. 2019 – Present
Ph.D. Computer Science   *Ben-Guérir, Morocco*
- Advisor: Ismail Berrada

Mohammed VI Polytechnic University   Oct. 2018 – Sept. 2019
Predoctoral year   *Ben-Guérir, Morocco*
Faculty of Science Dhar El Mhraz   Oct. 2016 – Jun. 2018
M.Sc. Big Data Analytics & Smart Systems   *Fez, Morocco*
- Advisor: Ismail Berrada

Faculty of Science Dhar El Mhraz   Oct. 2013 – Jun. 2016
B.A. Mathematics & computer science   *Fez, Morocco*

Publications

Meryem Janati Idrissi, Ismail Berrada, and Guevara Noubir. FEDBS: Learning on non-iid data in federated learning using batch normalization. In 2021 IEEE 33rd International Conference on Tools with Artificial Intelligence (ICTAI), pages 861–867. IEEE, 2021.

Meryem Janati Idrissi, Hamza Alami, Abdelkader El Mahdaouy, Abdellah El Mekki, Soufiane Oualil, Zakaria Yartaoui, and Ismail Berrada. Fed-ANIDS: Federated learning for anomaly-based network intrusion detection systems. In Expert Systems with Applications, Volume 234, 2023.

Meryem Janati Idrissi, Hamza Alami, Abdelhak Bouayad, and Ismail Berrada. NF-NIDS: Normalizing Flows for Network Intrusion Detection Systems. WINCOM'23

Talks & Appearances

Netys'23 https://netys.net/.
Talk: Deep Learning for Anomaly Detection. Presented at UM6P journée des doctorants 2022 (JDD'22).
AFIRM'20 (ACM SIGIR/SIGKDD Africa Summer School on Machine Learning for Data Mining and Search).
NASSMA'19 (North African Machine Learning Summer School) https://nassma.um6p.ma/.
Metis & Netys'19 http://metis2019.netys.net/.

Posters

JDD'21 Learning Batch Statistics for Non-IID Data in Federated Learning.

Academic projects

Design and implementation of a secure messaging system
Tools: Java   *Apr. 2019*

Implementation of Paxos algorithm
Tools: Java   *Mar. 2019*

Master thesis: **Extracting the state of the driver from car's camera using Deep Learning**
Tools: Python   *Feb.-Jun. 2018*

Implementation of a driver guide and safety app for the GM NG Infotainment System
Tools: Javascript   *Jan. 2018*

Implementation of a files malware analyzer
Tools: C#   *Jun. 2017*

Conceptual Modeling of Information Systems of a travel agency
Tools: ADONIS, OpenMP   *Jun. 2017*

Graduation Project: Realization of a trilingual glossary with two interfaces, user and admin
Tools: PHP and Javascript   *Jun. 2016*

Skills

Thechnical skills: Python, Pytorch, Java, C/C++, Slurm, HPC.
Spoken Languages: Arabic (Native), French/English (Fluent).
Other Interests: Gardening