Salah GHAMIZI
PhD Researcher @ Snt-University of Luxembourg

Tel: +33781780464 E-mail: salah.ghamizi@uni.lu

Education

SnT - University of Luxembourg   2019-2023
Ph.D. Researcher: Robust Machine Learning for Critical Applications

Selected papers:
- Simonetto, Thibault & Ghamizi, Salah & al. **A Unified Framework for Adversarial Attack and Defense in Constrained Feature Space; IJCAI22.**
- Ghamizi, Salah & Cordy, Maxime & Papadakis, Mike & Le Traon, Yves. **Adversarial Robustness in Multi-Task Learning: Promises and Illusions; AAAI22;**
- Ghamizi, Salah & Cordy, Maxime & Papadakis, Mike & Le Traon, Yves. **Evasion Attack STeganography: Turning Vulnerability Of Machine Learning To Adversarial Attacks Into A Real-world Application; ICCV21-AROW;**
- Ghamizi, Salah & Renaud Rwemalika & al. **Data-driven Simulation and Optimization for Covid-19 Exit Strategies.** *KDD 2020;* Best Paper Award*;*
- Ghamizi, Salah & Cordy, Maxime & Papadakis, Mike & Le Traon, Yves. (2020). **Search-based adversarial testing and improvement of constrained credit scoring systems. ESEC/FSE 2020;**
- Ghamizi, Salah & Cordy, Maxime & Papadakis, Mike & Le Traon, Yves. (2019). **Automated search for configurations of convolutional neural network architectures. SPLC 2019;**

GeorgiaTech / IAE Metz (France);   2016-2017
I-Corps/ Msc Entrepreneurship & Management of Innovative Businesses
Relevant Coursework: *Agile & Lean Projects, Team Management, Funding Proposal writing.*

MinesNancy, School of Computer Science   2012-2016
Bachelor then Master in Artificial Intelligence and Robotics.

Relevant Coursework: Algorithms, Data Structure, Artificial Intelligence, Image Analysis, Computer Architecture, Distributed Systems, Databases, Mobile & Web development, Probability & Statistics, Operations Research.
Capstone projects:
- ReTypograph; Using OpenCV-JAVA, text extraction & automated generation of text fonts from raw pictures of historical records (2014).

- iCrisis; tracking & prediction of crowd behavior in emergencies using video analysis with Optical Flows, wearable motion sensors, and RNN algorithms (2016).

Work Experience

BGL BNP Paribas,   Sept 2019
Research Scientist (intern)   Mars 2020

As part of my PhD, I worked on the robustness of financial systems (Credit Scoring, Fraud detection) to adversarial attacks. Demonstrated the vulnerability

of production systems to constrained attacks and designed a new MLOps pipeline to robustify and protect the system.

LumApps SAS, *R&D Engineer*	March 2018 Dec 2018

In charge of the improvements and deployment process of the platform of some of the company's major clients (Decathlon, Veolia,…) and implemented third party API integration Set up the open-source SDK of the company, and supervised the continuous delivery & testing architecture of the SDK (React/Typescript ; Python).

WAZA Education, *Co-founder and CTO*	Sept 2016 March 2018

Fullstack lead engineer of a team of 3 people:
- Built the MVP & Production platform using Angular & LAMP stack. Migrated the application to a GCloud scalable architecture with continuous deployment with Bitbucket pipelines. Sped up common user interaction up to 800% by refactoring runtime complexities & implementing caching and one-way bindings.
- Developed the scrapping and web-parsing platform based on DomJS/NodeJs frameworks.
- Designed and implemented our Natural Language Processing pipeline and models using NLTK (Python) and StanfordNLP (Java) for POS Tagging, NER, and Bayesian classifiers.
- Managed the various projects with SCRUM and test-driven development processes.

Recent Awards & Volunteering

COVID-19 Task Force (2020) - 120k€ Grant from *Luxembourg National Research Fund and AUF for 1-year research on Covid19 simulation and forecasting.*

i-LAB, Pépite (2017) - Awarded 6k€ from the *French Ministry of Research & Innovation for my NLP work on WAZA (400 candidates).*

EcoRevolutions (2016) - Awarded 12k€ from the "GrandEst" State for Edstore/WAZA project.

Imagine Cup (2016) – Finalist of the competition held by Microsoft France for project Edstore.

Organizations: Junior Chamber International (project leader), TEDx MinesNancy (Founder).

Languages

French | Arabic
Mother tongues

English
Fluent, C1 level: Cambridge Advanced Examination

Japanese
Basic notions: N4 level in Japanese Language Proficiency Test