Sofiane Lounici

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SKILLS

PROGRAMMING
Python and iPython Notebook
C, SQL
React and Vue.js

MLOPS
Apache Airflow, Azure, Google AI
Amazon SageMaker
Amazon Web Services

MACHINE LEARNING
Regression
Support Vector Machines
Bayesian Modeling
Gaussian Process
Decision Trees
Natural Language Processing
Pattern Recognition

SOFTWARE
PostgreSQL, Neo4j
MongoDB
Spark and Hadoop
Kafka
Docker
Git and Github

LANGUAGES
French : Native
English: Fluent
Russian: Professional Proficiency
Spanish: Professional Proficiency
Arabic: Notions

LINKS

GitHub
Linkedin

EXPERIENCE

SAP LABS FRANCE Research Engineer - PhD Candidate
2018 - | Sophia-Antipolis, France

- Following an end-of-studies internship as a Data Scientist, started an industrial PhD program in collaboration with Sorbonne Université and EURECOM, focusing on machine learning applications on security and privacy.

- Development of various projects, including identification of data leak on GitHub through machine learning, protection of model stealing through watermarking and courses in privacy and cryptography. Contributions to machine learning open-source projects.

TOMSK POLYTECHNIC UNIVERSITY Research Assistant
2019 | Tomsk, Russia
Research project to perform disease classification and patient cluster on a dataset labelled in Russian. Led data analysis to mitigate the missing data and developed adapted visualization tools. Followed technical courses on distributed computing and cryptographic protocols applied to data management.

EDUCATION

SORBONNE UNIVERSITÉ PhD. program
2019 | Sophia-Antipolis, France
PhD. program in Sorbonne Université and EURECOM, under the supervision of Melek Önen. focusing on machine learning applications on privacy, IP protection, open-source security.

IMT ATLANTIQUE & EURECOM Bs & Ms, Data Science
2016-2019 | Sophia-Antipolis, France
French *Grand Écoles* program, entering a TOP-5 engineering university in Computer Science. Master degree in Data Science and Machine Learning. Courses include statistical inference, deep learning, mathematical modeling. Minor in economics.

PROJECTS

IDENTIFICATION OF DATA LEAKS ON GITHUB
Research and development work on **Credential Digger**, an open-source tool to identifies hardcoded credentials published on GitHub while filtering the false positive data through machine learning models. Implementation of deep learning methods, including NLP models. Publication of a research paper at ICISSP 21' and a patent (U.S.Patent No. 16778872).

WATERMARKING NEURAL NETWORKS
Development of a Python Library **ML Model Watermarking** to automate intellectual property protection in machine learning pipelines, compatible with deep learning frameworks such as Scikit-Learn, PyTorch or HuggingFace. Publications to top security conferences such as SECRYPT 21'or CSF 21'.