Andrea Giammanco

PhD in Computer Engineering

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Experience

•Tenured Teacher of Computer Science *Nov 2023 - To Date*

I.I.S. G. D'Alessandro Bagheria, Italy

– Teaching Programming Foundations (**C**, **C++**, **Python**, **Flowgorithm**) to students in high school.

•PhD Scholar in Computer Engineering *Nov 2020 - Oct 2023*

University of Palermo Palermo, Italy

– *Research on **Adversarial Machine Learning** algorithms.*
– *Teaching the course **Introduction to Python Programming**.*
– *Teaching the exercises for the course in **Artificial Intelligence**.*
– *Supervision of 3 post-graduate research scholars.*
– *Scientific direction for 5 master's theses.*
– *Speaker at **AIxIA21** and **SmartComp2021** conferences.*
– **Thesis:** *Effective Perturbations in Adversarial Machine Learning Algorithms.*

•Post-Graduate Research Scholar in Computer Engineering *Nov 2018 - Oct 2020*

University of Palermo Palermo, Italy

– *Research on **Recommender Systems**, **User Profiling**, **Human Mobility Simulation**.*
– *Responsible for the **Recommender System** module in the **VASARI Research Project**.*
– *Speaker at **DS-RT19** conference.*

Education

•PhD in Computer Engineering *2020-23*

University of Palermo, Italy Thesis

•Master's Degree in Computer Engineering *2016-18*

University of Palermo, Italy Mark: 110/110 with honors

•Bachelor's Degree in Computer Engineering *2013-16*

University of Palermo, Italy Mark: 110/110 with honors

Publications

•Adverspam: Adversarial spam account manipulation in online social networks *Paper*

ACM Transactions on Privacy and Security *Code*

– *Abstract:* Optimization Problem for finding minimal Correlations-Preserving Adversarial Perturbations.
– *Areas of Interest:* Adversarial Machine Learning, Online Social Networks, Spam Recognition.

•Adversarial Machine Learning in e-Health: Attacking a Smart Prescription System *Paper*

AIxIA 2021 – Advances in Artificial Intelligence *Code*

– *Abstract:* Constrained number of Binary Features to alter in Adversarial Perturbations.
– *Areas of Interest:* Adversarial Machine Learning, e-Health.

•A multi-agent system for itinerary suggestion in smart environments *Paper*

CAAI Transactions on Intelligence Technology

– *Abstract:* Recommending Points-of-Interests based on User Profiles through Clustering.
– *Areas of Interest:* Machine Learning, Recommender Systems, Clustering, User Profiling.

•A Hybrid Recommender System for Cultural Heritage Promotion *Paper*

2021 IEEE International Conference on Smart Computing

– *Abstract:* Recommending Artworks through Content-Based and Collaborive filtering approaches.
– *Areas of Interest:* Machine Learning, Recommender Systems, Cultural Heritage, User Profiling.

Technical Skills and Interests

Programming Languages: C/C++, Python.
Libraries: numpy, pandas, matplotlib, pytorch.
Dev Tools: Git, Github.
Databases: MongoDb, Relational Database (MySQL).
Areas of Interest: Machine Learning, Algorithm Design, Data Science, Data Analysis, Data Visualization.
Soft Skills: Self-learning, Presentation of complex topics, Research, Teaching, Mentoring.
Languages: English (fluent), Italian (native).