Antonio Roberto

AI RESEARCHER

Contacts

Via Rubino Nicodemi, 34
Fisciano (SA), Italy

roberto.antonio@outlook.it

robertanto.github.io

Languages

- Italian - Native Speaker
- English - B2 CEFR

Soft Skills

- Teamwork & Leadership
- Adaptability
- Curiosity
- Quick Learning
- Problem Solving
- Critical Thinking

Education

PhD Student in Information Engineering

University of Salerno | December 2019 - current

- AI for Audio and Speech Analysis, Conversational AI, Deep Learning optimization for Embedded Systems

Master Degree in Computer Engineering

University of Salerno | October 2016 - December 2018

- Grade: 110/110 cum laude
- International thesis entitled "A method for forecasting financial time series based on empirical mode decomposition and manifold learning"

Bachelor Degree in Computer Engineering

University of Salerno | September 2013 - October 2016

- Grade:107/110
- Thesis entitled "Design and realization of adaptive services for an application of Digital Storytelling in the tourist sector"

Work

LOJO s.r.l.s

EBOLI (IT) | July 2017 - December 2018

- Development of a cross-platform mobile application for emergency management.
- Technologies: IONIC 3, Javascript, Angular JS, HTML5, CSS3

Research

ENSICAEN - Ecole Nationale Supérieure d'Ingénieurs de Caen

CAEN (FR) | July 2021 - October 2021

- Research collaboration with the IMAGE team of the GREYC laboratory on the topic "Speech analysis for Speaker Identification and Soft-Biometrics recognition based on Deep Learning methods"

University of Salerno - Research Grant

SALERNO (IT) | December 2018 - November 2019

- Deep Learning algorithms for Sound Event Detection.

Rijksuniversiteit Groningen

GRONINGEN (NL) | September 2018 - December 2018

- Erasmus period in collaboration with the Intelligent Systems research group on the topic "Financial time series forecasting".

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Extracurriculars

- Student representative
- Saxophonist in a Blues band
- Cultural Associationist

Hard Skills

Methodological skills

Machine Learning, Artificial Intelligence, Software Engineering, Statistics, Deep Learning, Optimization, Language Processing, Conversational AI, Digital Signal and Speech Processing, Bio-inspired Computation

Technical skills

Python, Java, C, Linux, Docker, SQL, Tensorflow, Keras, PyTorch, PyTorch Geometric, OpenCV, NumPy, Scikit-Learn, Scipy, HuggingFace, Apache Spark, Javascript, MATLAB, Swift, CSS, JQuery, PHP

Publications

- A Challenging Voice Dataset for Robotic Applications in Noisy Environments. CAIP 2019. Springer.
- Emotion analysis from faces for social robotics. SMC 2019. IEEE.
- A deep convolutionary network for automatic detection of audio events. APPIS 2020.
- Which are the factors affecting the performance of audio surveillance systems?. ICPR 2020. IEEE.
- Predicting Polypharmacy Side Effects Through a Relation-Wise Graph Attention Network. S+SSPR 2020. Springer.
- DENet: a deep architecture for audio surveillance applications. Neural Computing and Applications, 1-12. 2021. Springer.

Selected Projects

Social Robot application @ FIERA SICUREZZA 2021

MILAN (IT) | 2021

- Design and development of a Social Robotic application for the Fiera Sicurezza fair using the Pepper robotic platform.
- Spoken Language Understanding, Dialogue Management, Soft-Biometrics Recognition, People Tracking at edge on a NVIDIA Jetson Xavier NX embedded system
- ROS, Linux, CUDA, Pytorch, Tensorflow, OpenCV, Transformers

Facial emotion recognition (Team of 3 people)

SALERNO (IT) | 2018

- University Competition. Worked in a team of 4 people to develop a Convolutional Neural Network for recognizing emotion from facial images.
- Tensorflow, Keras, Python3

Autonomous driving with DuckieBot (Team of 4 people)

SALERNO (IT) | 2018

- University Competition. Worked in a team of 4 people to develop Computer Vision pipelines on board a Raspberry Pi to drive the bot.
- OpenCV, Scikit-Learn, Python3, Linux

Other project

Detailed list of projects available on LinkedIn and GitHub.