About me

I am a passionate and dedicated researcher in Biomedical Engineering, currently working on Explainable Artificial Intelligent algorithms for assisting Ovarian Cancer treatment.

I regard myself smiling, respectful, ambitious and fast-learner.

Outside of work, I am strongly passionate about sport and travelling, always searching for new fast-paced experiences.

Contacts

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linkedin.com/in/francesca-fati

https://github.com/FrancescaFati

Skills

Techinal

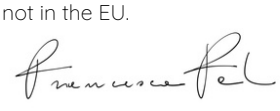
Programming/IT: Python, C++, C, MATLAB, Git, JavaScript
AI: PyTorch, TensorFlow, Keras, SciKit
Engineering: ROS
Hardware: Microcontrollers
Office: LaTeX, Microsoft Office Suite

Languages

Italian: Native speaker
English: TOIEC Level B2, 2020.

This CV was last updated on August 25th 2023.

I authorize the processing of personal data according to EU Regulation 679/2016 or according to the reader's local regulations if not in the EU.



Clicking will open a research paper
Clicking will open my github profile
Clicking will open a webpage

Francesca Fati

Researcher in Biomedical Engineering

Milan, Italy
Born: 27th October 1997

Education

MSc in Biomedical Engineering, 110/110 cum laude
September 2020 - May 2023
Politecnico di Milano, IT
Thesis: "Hybrid Model for a tendon-driven steerable catheter for minimally invasive Mitral valve repair " at NEARLab.
Supervisor: Prof. Elena De Momi.

BSc in Biomedical Engineering, 110/110
September 2016 - October 2019
Università di Genova, IT
Thesis: "Algorithm for clustering analysis in neural networks".
Supervisor: Marco Storace.

Working Experience

Internship at NEARLab
June 2023 - in progress
Politecnico di Milano, IT
Under-XAI: Explainable AI classification model for detecting Ovarian Cancer resectability.
Collaboration: Magna Graecia Univeristy, European Institute of Oncology.

Au Pair
January 2020 - June 2020
St Albans, London, UK.

Publications

Optimizing Heart Valve Surgery with Model-Free Catheter Control
Bicchi A., **Fati F.**, Quacquarelli M., Votta E., De Momi E.
Hamlyn Symposium on Medical Robotics 2023.

Reproducing a decision-making network in a virtual visual discrimination task
Trapani A., Sheiban F., Bertone E., Chiosso S., Colombo L., D'Andrea M., De Santis F., **Fati F.**, Fossati V., Gonzalez V., Pedrocchi A.
Frontier in Integrative Neuroscience 2022.

Relevant Works

E-health Methods and Applications
"Alexa skill for cognitive impairment in patients affected by stroke"
Implementation of a comprehensive Alexa skill to support the rehabilitation of stroke patients, promoting adherence and providing various memory exercises.

Medical Robotics and Technologies for computer aided surgery laboratory
"A deep learning approach for cystoscopy/ureteroscopy tumours segmentation"
Implementation of a convolutional neural network with data augmentation techniques to recognize lesions/tumors in images of the urinary tract during endoscopic surgery.

Technologies for sensors and clinical instrumentation
Design of a joystick composed of four light dependent resistor sensors to be used in an engaging computer game for hand rehabilitation.