

Michele Svanera

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Research Interests

My primary research focus is artificial intelligence for medical imaging, but since childhood, I have been interested in the intricacies and mysteries of the human brain, with a central question of how it works. Although we know so little about the brain and its health, this topic has led me to ask more questions and expand my research into various fields, including cognitive and clinical neuroscience and artificial intelligence. While trying to gain a more comprehensive understanding of the brain, my ultimate goal is to develop new diagnostic and therapeutic approaches for neurological and psychiatric conditions and to translate this knowledge into tangible benefits for individuals. To achieve this, I leverage cutting-edge AI techniques, like deep learning, and state-of-the-art brain imaging technologies, such as 7T MRI, to study Brain Health. For more insights on my research, please visit my [personal website](#).

Work Experience

2022

Lecturer, *School of Psychology & Neuroscience*, University of Glasgow (UK).

- ◇ Application of recent deep learning methods to develop the first DL-based cortical thickness estimation on human brain MRI. A fast and reliable extraction of cortical thickness distributions will unlock the ability to derive population trajectories for thousands of healthy subjects' and patients with Alzheimer's symptoms, creating an atlas with cortical thickness distributions for different brain areas.
- ◇ Development of a novel Artificial Intelligence Method for inferencing impaired cognition trajectories from MRI data in patients with Alzheimer's dementia. Artificial intelligence tools have attempted to diagnose MR images into simple labels like 'disease' vs 'no-disease'. However, this approach fails to capture the cognitive impact of the disease on the patient. This project aims to link cognitive impairments to anatomical variations and track changes in symptoms over time.
- ◇ Development of a new tool for brain MRI analysis at 3T, working with scans from any site in the world. The method produces state-of-the-art results, consistent across internal and external sites, robust to anatomical variations. Portable for use in various healthcare settings, patient populations, and imaging tech. More on the [project website](#).

2023

Senior Machine Learning Scientist, *Yonder*, Italy.

- ◇ R&D for Machine Learning and Computer Vision projects.
- ◇ Software development for data science projects and applications.

2019

2021

Research Associate, *School of Psychology & Neuroscience*, University of Glasgow (UK).

- ◇ Application of recent methods on correlation analysis to test predictive coding theories on the functional connectivity organisation of early visual cortex activation elicited by watching movies.
- ◇ Novel approach for early visual cortex modelling. Challenging DL models and the human brain to solve same (visual) tasks, I obtained a new promising way to compare DL with brain data. More on the [project website](#).
- ◇ Development of new tools for brain MRI analysis at 3T and 7T; focusing on segmentation, I developed a tool that performs better and faster than any automatic method available and it has been approved by experts. More on the [project website](#).

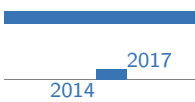


2017 2019

Research Assistant, Institute of Neuroscience and Psychology, University of Glasgow (UK).

I addressed the goal to understand the brain activities (fMRI) in relation with movie stimulus applying recent advances in machine learning. Duties included: development of experimental procedures, design and programming of behavioural and f/MRI experiments (3 and 7 Tesla), recording and analysing of the results, developing new multivariate-analysis procedures, review of current literature in relevant fields, presenting at conferences, and participating in the writing up of the results.

Education



2014 2017

Doctoral program (Ph.D.), Department of Information Engineering, University of Brescia (Italy).

During my Ph.D., I tried to combine three great passions of mine: AI, neuroscience, and movies. The result of this long journey allowed me to exploit movie representations as *trait d'union* to study AI and Neuroscience. The thesis, titled "*Movies and the brain: learning video content representation for cinema studies and neuroscience*" shows how representation learning can help find suitable numerical representations to use in fMRI data analysis and cinema studies.

International experiences

Visiting PhD

Functional Brain Center, Sourasky center, Tel Aviv (Israel): I spent few months in Israel opening a new line of research on Deep Learning approaches for fMRI analysis, in collaboration with prof. Talma Hendler. In the meantime, I taught more than 20 hours of Introduction to Deep Learning to the entire department. (2016)

Visiting PhD

Maastricht Brain Imaging Centre, Maastricht (Netherlands): These six months, in collaboration with prof. Rainer Goebel, gave me my first immersion in the field of Neuroscience. We worked together on the reconstruction of audio-visual features based on fMRI signal, using one of the biggest fMRI dataset ever collected. (2015)



2011 2013

Master of Science (M.Sc. Eng.),

Telecommunication Engineering, University of Brescia, Italy.

Master thesis: Methods and models for the synthesis and representation of 3D surfaces.

Relevant courses: information theory, digital modulation and channel coding, system identification and data analysis, image processing and visualisation, digital systems for signal processing, multimedia information coding, digital audio processing, remote sensing data analysis.



2006 2011

Bachelor of Science (B.Sc. Eng.),

Electronic Engineering, University of Brescia, Italy.

Bachelor thesis: Development of eye tracking technique software.

Relevant courses: linear algebra, mathematical analysis, analysis of differentiation and integration, statistical methods, probability, multivariable calculus, electromagnetic theory, waves and diffraction, operative systems, informatics, electronic engineering, analogue and digital electronics, communication systems.

Research Funding



2024

Carnegie research incentive grants, submitted, £20k.

Early Career Researcher pump priming funds - Title "A novel Deep Learning method for estimating Cortical Thickness trajectories in Alzheimer's patients and healthy population".

2023

MRC DTP in Precision Medicine Scholarship, granted, £120k.

PhD Scholarship x4 years - Title "A novel Deep Learning method for estimating Cortical Thickness trajectories in Alzheimer's patients and healthy population". The goal of this project is to exploit recent achievements in deep learning (DL) segmentation methods for cortical thickness estimation on human brain MRI. The extraction of cortical thickness distributions in a few minutes will unlock the ability to draw population trajectories for thousands of healthy subjects' data in short time, creating an atlas with different distributions for different brain areas.

2023

SGSSS Supervisor-led Steers Studentship Competition, granted, £78k.

PhD Scholarship x4 years - Title "A novel Artificial Intelligence Method for inferencing impaired cognition trajectories from MRI data in patients with Alzheimer's dementia". In this project, we will exploit recent achievements in Artificial Intelligence for inferring symptoms from brain MRI images of patients with AD. Several studies have shown that AD correlates with anatomical changes, such as a decrease in white matter volume or an increase in ventricle size. However, how single AD symptoms (i.e., cognitive impairments) produce anatomical changes is yet to be discovered. Here, we want the student to relate cognitive impairments to anatomical changes, drawing symptom trajectories changes over time.

2021

UKRI CDT in Socially Intelligent Artificial Agents, granted, £90k.

PhD Scholarship x4 years - Title "Towards modelling of biological and artificial perspective taken". In this project, we will use Ultra High Field fMRI to read brain activity while participants (aphantasics and non-aphantasics) are presented with either single-sentence descriptions of object categories (e.g. "a red chair") or different visual exemplars from the same categories to investigate how the different representations of the same categories are perceived using AI modelling.

2020

UKRI CDT in Socially Intelligent Artificial Agents, granted, £85k.

PhD Scholarship x4 years - Title "Lateralisation in Brain Age Prediction". In this project, we will study brain lateralisation changes associated with healthy and not healthy brain ageing by implementing Artificial Intelligence models to predict the brain-age of each hemisphere independently.

Teaching

2022

Statistical and Scientific Models (PSYCH4037), Master course, 6 ECTS, 60 hours.

Main topic: Deep Learning methods for f/MRI analyses

2017

Fundamentals of computer graphics, Master course, 9 ECTS, 120 hours, T.A.

Main topics: geometric modelling, rendering and illumination, rasterization, texture mapping, volumetric rendering. Libraries: OpenGL and Unity, in python and C++. SW: Blender.

2014

2015

Digital image processing, Master course, 3 ECTS, 30 hours, T.A.

Main topics: geometric transformations, filtering, edge detection, image segmentation, morphological operators, feature extraction (ex. SIFT), source coding principles. Libraries: OpenCV in python and C++.

2014

2015

Introduction to Deep Learning, Staff seminars, 20 hours.

Introduction to Deep Learning for the Neuroscience department: 4 lessons of 20 hours.

Research Supervision

PhDs supervision:

Currently four students supervised:

2023

Austin Dibble, PhD student, UofG.

UKRI funded, SGSSS CDT program, first year, working on "A novel Artificial Intelligence Method for inferencing impaired cognition trajectories from MRI data in patients with Alzheimer's dementia". Co-supervision with Professor Monika Harvey and Dr Michele Sevegnani.

2023 **Connor Dalby**, *PhD student*, UofG.

UKRI funded, MRC CDT program, first year, working on “Deep Learning methods for studying lateralisation in Brain Age Prediction”. Co-supervision with Dr. Alessio Fracasso and Professor Lars Muckli.

2022 **Andreas Drakopoulos**, *PhD student*, UofG.

UKRI funded, Social AI CDT program, currently second year, working on “Deep Learning methods for studying lateralisation in Brain Age Prediction”. Co-supervision with Professor Monika Harvey and Dr Michele Sevegnani.

2022 **Roberto Scott Luciani**, *PhD student*, UofG.

UKRI funded, Social AI CDT program, currently first year, working on “Towards modelling of biological and artificial perspective taken”. Co-supervised with Professor Lars Muckli and Dr Michele Sevegnani.

Masters supervision:

Here are two examples of key alumni from the 30+ BSc. and MSc. students supervised:

2019

Deep learning methods for MRI data analysis, *Master thesis*, University of Brescia.

In this thesis, we adopted a weakly-supervised learning strategy to develop a tool to produce accurate multi-structure segmentation results in only few seconds. The outcome of the work is “CEREBRuM: a fast and fully-volumetric Convolutional Encoder-decodeR for weakly-supervised sEgmentation of BRain strUctures from out-of-the-scanner MRI” published in *Medical Image Analysis*. The former student is now Ph.D. student at Harvard Medical School.

2016

Hair detection, segmentation, and hairstyle classification in the wild, *Master thesis*, University of Brescia (Italy).

In this thesis, we tackled the problem of hair analysis (detection, segmentation, and hairstyle classification) from unconstrained view by relying only on textures. The outcomes of the work are “Hair detection, segmentation, and hairstyle classification in the wild” published in: *Image and Vision Computing* and “Figaro, hair detection and segmentation in the wild” presented at *ICIP-2016*. The former student is now Senior AI Algorithm Developer at Huawei Technologies.

At the end of this document, there is the complete list of all BSc and MSc supervisions.

Invited talks

2024

Invited speaker, Brain Monitoring with Information Technology Group “BrainIT” meeting, (2024-05-24).

2024

Invited speaker, Pint of Science 2024, (2024-05-15).

2024

Invited speaker, ICE workshop on 7T cancer imaging, (2024-04-25).

2024

Chair, Neurotechnology Workshop: Session Chair. (2024-03-25)

2024

Invited speaker, Biomarkers Meeting - Brain Health ARC, (2024-02-23).

2023

Invited speaker, AI in Pervasive Well-Being and Healthy Ageing workshop, (2023-06-29).

2023

Invited speaker, SINAPSE annual meeting - Image Analysis session, (2023-06-14).

2023

Invited speaker, Advanced Imaging Workshop, (2023-03-24).

Journal Publications

2024

Dalby, C., D. Ferrari, A. Fracasso, L. Muckli, S. Benini, and **M. Svanera**. “DeepThick-ness: A Deep Learning Method for Brain MRI Cortical Thickness Estimation”. In: DOI: [inpreparation](#).

2024 Moia S. H.T. Wang, A. Heinsfeld D. Jarecka Y. Yang S. Heunis **M. Svanera** et al. and The Physiopy Community. "Proceedings of the OHBM Brainhack 2022". In: *Aperture Neuro* 4. DOI: 10.52294/001c.92760.

2024 Petro, L., **M. Svanera**, A. T. Morgan, K. Seignette, C. N. Levelt, P. Papale, F. Wang, X. Chen, A. Gilhuis, P. R. Roelfsema, Matthew W. Self, and L. Muckli. "Multidisciplinary and multiscale perspective on cortical feedback mechanisms". In: *Nature Reviews Neuroscience (with editor)*. DOI: <https://doi.org/10.5281/zenodo.8380093>.

2024 **Svanera M.**, A. Dibble, M. Sevegnani, and M. Harvey. "Investigating Brain Lateralisation with Deep Learning-based Brain Age MRI Prediction". In: DOI: inpreparation.

2024 **Svanera M.**, M. Savardi, A. Signoroni, S. Benini, and L. Muckli. "Fighting the scanner effect in brain MRI segmentation with a progressive level-of-detail network trained on multi-site data". In: *Medical Image Analysis* 93, p. 103090. DOI: <https://doi.org/10.1016/j.media.2024.103090>. URL: <https://www.sciencedirect.com/science/article/pii/S136184152400015X>.

2022 **Svanera M.**, M. Savardi, A. Signoroni, S. Benini, and L. Muckli. "Fighting the scanner effect in brain MRI segmentation with a progressive level-of-detail network trained on multi-site data". In: *arXiv*. DOI: 10.48550/ARXIV.2211.02400. URL: <https://rocknroll187q.github.io/LOD-Brain/>.

2021 **Svanera M.**, S. Benini, D. Bontempi, and L. Muckli. "CEREBRUM-7T: Fast and Fully-volumetric Brain Segmentation of 7 Tesla MR Volumes". In: *Human Brain Mapping* 42.17, pp. 5563–5580. URL: <https://rocknroll187q.github.io/cerebrum7t/>.

2021 **Svanera M.**, A.T. Morgan, L.S. Petro, and L. Muckli. "A self-supervised deep neural network for image completion resembles early visual cortex fMRI activity patterns for occluded scenes". In: *Journal of Vision* 21.7, pp. 5–5. DOI: <https://doi.org/10.1167/jov.21.7.5>.

2020 Bontempi, D., S. Benini, A. Signoroni, L. Muckli*, and **M. Svanera***. "CEREBRUM: a fast and fully-volumetric Convolutional Encoder-decodeR for weakly-supervised sEgmen-tation of BRain strUctures from out-of-the-scanner MRI". In: *Medical Image Analysis* 62, p. 101688. DOI: <https://doi.org/10.1016/j.media.2020.101688>.

2019 Bálint, K.A., Gal Raz, Valente G, **M. Svanera**, and S. Benini. "A Robust Neural Fingerprint of Cinematic Shot-Scale". In: *Projections* 13.3, pp. 23–52. DOI: 10.3167/proj.2019.130303.

2019 **Svanera M.**, S. Benini, G. Raz, T. Hendler, R. Goebel, and G. Valente. "Transfer learning of deep neural network representations for fMRI decoding". In: *Journal of Neuroscience Methods* 328, p. 108319. DOI: 10.1016/j.jneumeth.2019.108319.

2019

Svanera M., M. Savardi, A. Signoroni, K.A. Bálint, and S. Benini. "Who is the film's director? Automatic style recognition based on shot features". In: *IEEE MultiMedia Magazine* 26.4, pp. 43–54. DOI: 10.1109/MMUL.2019.2940004.

2018

Muhammad, U. R., **M. Svanera**, R. Leonardi, and S. Benini. "Hair detection, segmentation, and hairstyle classification in the wild". In: *Image and Vision Computing* 71, pp. 25–37. DOI: 10.1016/j.imavis.2018.02.001.

2017

Raz, G., **M. Svanera**, N. Singer, G. Gilam, M. B. Cohen, T. Lin, R. Admon, T. Gonen, A. Thaler, R. Y. Granot, R. Goebel, S. Benini, and G. Valente. "Robust inter-subject audiovisual decoding in functional magnetic resonance imaging using high-dimensional regression". In: *NeuroImage* 163, pp. 244–263. DOI: 10.1016/j.neuroimage.2017.09.032.

2016

Benini, S., **M. Svanera**, N. Adami, R. Leonardi, and K.A. Bálint. "Shot Scale Distribution in Art Films". In: *Multimedia Tools and Applications* 75, pp. 16499–16527. DOI: 10.1007/s11042-016-3339-9.

2016

Gordiychuk, A., **M. Svanera**, S. Benini, and P. Poesio. "Size distribution of micro bubbles for a venturi type bubble generator: effect of different parameters on bubble mean size , statistics of the distribution". In: *Experimental Thermal and Fluid Science* 70, pp. 51–60. DOI: 10.1016/j.expthermflusci.2015.08.014.

International Conferences and Posters

2023

A. Signoroni M. Savardi, D. Farina S. Benini E. Coppola D. Ferrari M. Massussi S. Curello **M. Svanera** G. D'Ancona. "Medical image interpretation challenges and research activities of the tAlmedIA group at UniBS". In: *CEUR WORKSHOP PROCEEDINGS*. Vol. 3486. CEUR-WS, pp. 118–123.

2023

L. Muckli C. Levelt, T. Morgan P. Papale P. Roelfsema K. Seignette M. Self **M. Svanera** L. Petro. "The cortical microcircuitry of contextual processing in mice, monkeys, and humans". In: *Organization for Human Brain Mapping (OHBM) - Seoul, Korea, submitted*.

2023

Svanera M., A. Drakopoulos, M. Sevegnani, and M. Harvey. "Investigating Brain Lateralisation with Deep Learning-based Brain Age MRI Prediction". In: *Organization for Human Brain Mapping (OHBM) - Montréal, poster*.

2022

Svanera M., M. Savardi, S. Benini, A. Signoroni, and L. Muckli. "Fighting the Scanner Effect: a Coarse-to-Fine 3D Network for Multi-Site Brain MRI Segmentation". In: *Organization for Human Brain Mapping (OHBM) - Glasgow, poster*.

2019

Bontempi, D., S. Benini, A. Signoroni, L. Muckli*, and **M. Svanera***. "Fast Brain MRI Segmentation Using a Volumetric Deep Learning Approach". In: *2019 Conference on Cognitive Computational Neuroscience (CCN)*. URL: <https://ccneuro.org/2019/proceedings/0000157.pdf>.

2018

Svanera M., A. T. Morgan, L. S. Petro, and L. Muckli. "Unsupervised deep neural network for fMRI feedback modelling". In: *2018 Conference on Cognitive Computational Neuroscience (CCN)*. URL: <https://ccneuro.org/2018/proceedings/1055.pdf>.

2016

Raz, G., **M. Svanera**, N. Singer, G. Gilam, M. B. Cohen, T. Lin, R. Admon, T. Gonen, A. Thaler, R. Y. Granot, R. Goebel, S. Benini, and G. Valente. "Robust inter-subject audiovisual decoding in fMRI using kernel ridge regression". In: *Organization for Human Brain Mapping (OHBM) - Geneva, poster*.

2016

Svanera M., S. Benini, G. Raz, T. Hendler, R. Goebel, and G. Valente. "Deep driven fMRI decoding of visual categories". In: *NeurIPS Workshop on Representation Learning in Artificial and Biological Neural Networks (MLINI, 2016)*. URL: <https://arxiv.org/abs/1701.02133>.

2016

Svanera M., U. Riaz Muhammad, R. Leonardi, and S. Benini. "Figaro, hair detection and segmentation in the wild". In: *Proceedings of IEEE International Conference on Image Processing (ICIP, 2016)*. DOI: 10.1109/ICIP.2016.7532494.

2015

Svanera M., S. Benini, N. Adami, R. Leonardi, and K.A. Bálint. "Over-the-Shoulder Shot Detection in Art Films". In: *13th International Workshop on Content-Based Multimedia Indexing (CBMI, 2015)*. DOI: 10.1109/CBMI.2015.7153627.

Committees & Editorial Boards

2024

Internal Examiner, PhD viva, Candidate: Katarina Moravkova, Title: "Topographic organization of eye-position dependent gain fields in human visual cortex". University of Glasgow, School of Psychology & Neuroscience PhD thesis.

2023

Internal Examiner, PhD viva, Candidate: Jack Radford, Title: "Information limits of imaging through highly diffusive materials using spatiotemporal measurements of diffuse photons". University of Glasgow, School of Physics & Astronomy PhD thesis.

2022

Frontiers in Neuroimaging, Associate Editor, by invitation. Editorial Board of Brain Imaging Methods (specialty section of Frontiers in Neuroscience, Frontiers in Neurology and Frontiers in Neuroimaging).

2022

Thesis Mentoring programme, Mentor. The Thesis Mentoring programme aims to help by pairing PGRs who are actively writing their thesis with a trained and experienced Thesis Mentor.

2022

Broadening Horizons Mentoring, Mentee. Broadening Horizons is a cross-sector mentoring programme designed to support, develop and empower early-career researchers who are interested in translational research for impact on health. The programme launched in 2020 with seed funding from Wellcome.

2022

OHBM2022, Organiser. Member of the organisation panel of Organization for Human Brain Mapping 2022 in Glasgow, counting around 4k attendees.

2022

OHBM2022 Hackathons, Organiser. Member of the organisation panels of two Organization for Human Brain Mapping 2022 Hackathons in Glasgow, counting around 180 and 35 registered attendees.

Languages

Italian Native speaker
English Fluent

Mother Tongue
Daily practice, all work performed in English

Programming Skills

★★★★★
python, bash, 

★★★★☆
Matlab, LaTeX

★★★★☆☆
C, C++, Java, R

★★☆☆☆
PHP, HTML, CSS,
MySQL

Deep Learning frameworks

TensorFlow ★★★★★
PyTorch ★★★★★

OS experience

GNU/Linux ★★★★★
MacOS ★★★★★
Windows ★★★★★

Interests

Hobby Reading, cooking, PC strategy games, walking, and homebrewing.
Sport Football, swimming, running, cycling, yoga, squash, and bouldering.

References

I would appreciate it if you could kindly inform me before contacting the references provided here.

Lecturer line manager

Prof. Gregor Thut
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Post-doc PI

Prof. Lars Muckli
Glasgow University, UK
✉ Lars.Muckli@glasgow.ac.uk

Ph.D. Advisor

Prof. Sergio Benini
University of Brescia, Italy
✉ Sergio.Benini@unibs.it

Thesis advisor of BSc and MSc students

2024

● **Samuele Ponzin**, M.Sc. Eng. in Communication Technologies and Multimedia.

“Direct Estimation of Cortical Thickness From Structural MRI Brain Images for Early Diagnosis of Neurodegenerative Diseases”, 2024.

2024

● **Lama Jamaledine**, M.Sc. Student in Research Methods in Psychological Science.

“Exploring Relationships Between Brain Structure Volumes And Cognitive Decline In Al Zheimer’s Disease Patients”, 2024.

2024

● **Khristina Bondar**, M.Sc. in Psychological Science.

“Impact of Obesity on Brain Age and Cognitive Function”, 2024.

2024

● **India Block**, M.Sc. in Psychological Science.

“Exploring Deep Learning method DeepThickness as a tool for rapid identification of Alzheimer’s disease risk to aid early intervention”, 2024.

2024 **Teresa Monsberger**, M.Sc. in Psychological Science.
 “Alzheimer’s disease progression and the network degeneration hypothesis: Group differences in cortical thickness in healthy participants, MCI, and AD patients”, 2024.

2023 **Jose’ Maria Baldaque Oliveira Gomes Lopes**, M.Sc. in Neuroscience.
 “Assessing the Predictive Power of Biologically Motivated Convolutional Neural Network Models of The Human Visual System in fMRI”, 2024.

2023 **Damiano Ferrari**, M.Sc. Eng. in Ingegneria Informatica.
 “A Deep Learning Method for Cortical Thickness Estimation from MRI”, 2023.

2023 **Salman Jan**, M.Sc. Eng. in Communication Technologies and Multimedia.
 “Brain Tumour Segmentation using Deep Learning Techniques”, 2023.

2023 **Yujia Gong**, M.Sc. in Psychological Science.
 “The Impact of Fitness Backgrounds on the Usability of Fitness Applications”, 2023.

2023 **Jiaren Lu**, M.Sc. in Psychological Science.
 “The Impact of Motivation on Users’ Continued Use of Mobile Fitness Apps”, 2023.

2023 **Shuhan Jia**, M.Sc. in Psychological Science.
 “Explore Different Personality Responses to Reward Mechanisms by Mobility Application”, 2023.

2022 **Alemu Sisay Nigru**, M.Sc. Eng. in Communication Technologies and Multimedia.
 “Deep Learning Method for Image Search”, 2022.

2022 **Tsireledzo Phosa**, M.Sc. in Psychological Science.
 “Brain MRI Segmentation Evaluation: Differences between Experts and Naive in 3T Multisite”, 2023.

2022 **Alexander Buchberger**, M.Sc. in Psychological Science.
 “The Construction and Prediction of Visual Perception: Exploring the Dynamics of Apparent Motion Masking”, 2023.

2020 **Simona Fratus**, M.Sc. Eng. in Ingegneria Informatica.
 “A Fully 3D Volumetric Deep Learning Method for Brain Segmentation of Large Scale MRI data”, 2020.

2020 **Giulia Zilioli**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Tecniche di Brain Imaging”, 2020.

2019 **Dennis Bontempi**, M.Sc. Eng. in Communication Technologies and Multimedia.
 “A Fully Volumetric Deep learning Approach to Brain MRI Segmentation”, 2019.

2016 **Marco Cominelli**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Classificazione automatica di inquadrature in film d’autore mediante apprendimento supervisionato”, 2016.

2016 **Mohammad Umar Riaz**, M.Sc. Eng. in Communication Technologies and Multimedia.
 “Texture Classification Methods For Human Detection”, 2016.

2015 **Davide Marinoni**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Identificazione del contesto geometrico della scena in immagini”, 2015.

2015 **Marco Lombardi**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Classificazione di capelli in immagini con macchine a vettori di supporto”, 2015.

2015 **Marco Bianchetti**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Una applicazione didattica di un sistema di realta’ aumentata”, 2015.

2015 **Alessandro Filini**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Segmentazione di immagini basata su grafi”, 2015.

2015 **Andrea Morsucci**, B.Sc. Eng. in *Ingegneria Elettronica e delle Telecomunicazioni*.
 “Un algoritmo di learning per l’identificazione di oggetti salienti”, 2015.

2014

Mattia Savardi, B.Sc. Eng. in Ingegneria Elettronica e delle Telecomunicazioni.
"Identificazione di pedoni in immagini e video", 2014.

2013

Mohammad Umar Riaz, B.Sc. Eng. in Ingegneria Elettronica e delle Telecomunicazioni.
"Anonimizzazione di volti in immagini e video", 2013.