Alessandro Delmonte

Personal Data

Place and Date of Birth:	Turin, Italy | October 19, 1992
Address:	212, Rue de Tolbiac - 75013 - Paris, France
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Work Experience

Current – Mar. 2018
R&D Engineer at Imagine Institute - Paris (FR)
MRI Imaging / 3D Modeling
Lead developer at IMAG2 team in Necker Hospital. Definition and implementation of software plug-ins for the recognition and segmentation of significant anatomical structures. Creator of the IMAG2 diffusion suite and portability work-flow coordinator. Applications in image-guided surgery through the use of 3D models, with focus on visceral surgery.

Sep. 2017 - Feb. 2018
Research Engineer at LTCI, Télécom ParisTech - Paris (FR)
Diffusion Imaging and Tractography Segmentation
Internship at IMAGES group in Télécom ParisTech. Developer of Fuzzy Tracts, software for the automatic segmentation of white matter fiber bundles starting from whole-brain tractograms. Delineation of an innovative method combining clustering algorithms and fuzzy logic approaches. Responsible for coding, strategy definition and result presentation in international conferences.

Sep. 2014 - Feb. 2015
Clinical Engineer at E.C.A.S. Clinica Cellini e Fornaca - Turin (IT)
Management Services
Internship in one of the most renowned clinic of the region, with focus on hospital structures management. Consumer satisfaction analysis through reports production and investigation. Update of hospitalization procedures. Digitization of medical devices information. Medical data storage.

Education

Mar. 2018
Master's Degree in Biomedical Engineering
Major: Medical Informatics - Polytechnic University of Turin
Advisors: Prof. Isabelle Bloch, Prof. Pietro Gori, Prof. Filippo Molinari

Other Work Experience

Current – Mar. 2018
Master students co-supervision during university courses.
External collaborator in 3D modeling programs and research projects.

Publications

Apr. 2019
White Matter Multi-Resolution Segmentation Using Fuzzy Set Theory
Delmonte A. et al, IEEE International Symposium on Biomedical Imaging

Jun. 2018
Segmentation of White Matter Tractograms Using Fuzzy Spatial Relations
Delmonte A. et al, OHBM 2018

Languages

Italian	Mother Tongue	English	Full Professional Proficiency
		French	Upper-Intermediate Proficiency

Technical Skills

Experience in Data Science, Image Processing, Scientific Programming, Machine Learning, Pipelines, GUI and Unit Testing.

Programming Languages	Python (with Jupyter Notebooks), Java, C++ (VTK, ITK)
Data Science	MatLab
Systems	Bash
Front-End	HTML/CSS, JavaScript, PHP.
Version Control	Git (GitHub, GitLab, BitBucket), SVN.
Tools	Docker, Code Profilers and Coverage Trackers, Debuggers, IDEs.
Continuous Integration	Issue Trackers (Jira, YouTrack), Slack, Trello.
Medical Softwares	3DSlicer, Freesurfer, FSL, ITK Snap, DTI Studio, TrackVis.
Others	Redaction of technical manuals and software documentation. Software modeling (UML, activities, stakeholder analysis, ...)

Computer Skills

OS	Experience in system administration for Unix-based machines. Proficient command line user. Comfortable using any environment.
Office	Expert user of multiple productivity and presentation softwares. ECDL Full in Microsoft Office. LaTeX.

General and Communication Skills

Problem solving capabilities. Able to analyze a problem using a structured approach. Capable of identifying and finding solutions to complex problems using scientific methods.

Time management, organizational skills and work ethic.

Ability to fit in a multicultural environment. Acquired working in international environment during both professional experiences and school studies.

Ability to interact with people of different domains in the most suited manner. Learned during experiences in hospital structures and multi-disciplinary projects.

Other Skills

Mathematics: Strong mathematical and physics knowledge. Good foundations of supervised and unsupervised machine learning, classification and statistics algorithms.

Electronics: Excellent electronic knowledge applied in the medical field. Able to understand the operating principles of surgical instrumentation and medical devices.

Sensors: Ability to perform measures, compute the associated uncertainty and process the data extracted. Excellent knowledge of medical signal processing techniques.