ALESSANDRO DELMONTE

212 rue de Tolbiac ◇ 75013 - Paris ◇ France
(+33) 7-76-04-96-99 ◇ alessandro.delmonte@institutimagine.org

RESUME

Biomedical engineer specialized in image processing and 3D modeling. Currently the engineer of the image-guided surgery research team at the main pediatric hospital of Paris.

WORK EXPERIENCE

Hôpital Necker-Enfants Malades (AP-HP) Mar. 2019 - Present
Clinical Engineer *Paris, FR*

Software Development for robotic surgery applications. Clinical data management.

IMAG2 at Imagine Institute Mar. 2018 - Feb. 2019
Team Engineer & Developer *Paris, FR*

Implementation of plug-ins for anatomical structures recognition. Creator of the IMAG2 difusion suite and portability work-flow coordinator. 3D modeling for image-guided surgery using classical and deep-learning approaches. Focus on visceral/abdominal applications.

LTCI, Télécom ParisTech Sep. 2017 - Feb. 2018
Research Engineer *Paris, FR*

Development of segmentation software for white matter fiber bundles. Delineation of methods combining machine learning and fuzzy logic. Responsible for coding, strategy definition and results presentation in international conferences.

E.C.A.S. Clinica Cellini e Fornaca Sep. 2014 - Feb. 2015
Clinical Engineer *Turin, IT*

Consumer satisfaction analysis. Update of hospitalization procedures. Digitization of medical devices information. Medical data storage.

COMPLEMENTARY EXPERIENCES

· Strategy definition for start-up creation. Commercialization of medical data access. Collaboration with bio-entrepreneurship program (HEC). *Jan. 2019 - Present*
· 3D printing of bio-mechanical parts for surgical planning and clinical practices. *Nov. 2018 - Present*
· Master students co-supervision in image processing courses (Télécom ParisTech). *Sept. 2018 - Feb. 2019*
· External collaborator in clinical projects (maxillo-facial and cardiology). *Apr. 2018 - Dec. 2018*

EDUCATION

Polytechnic University of Turin, Turin (IT) *March 2018*
MSc in Biomedical Engineering - Medical Informatics

LANGUAGES

Italian Mother-tongue **English** Full Professional Proficiency
French Working Proficiency

TECHNICAL SKILLS

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

Computer Languages	Python, Matlab, Bash
Front-End	HTML/CSS
Version Control	Git (GitHub, GitLab, BitBucket), SVN
Tools	Docker, Vim, LaTeX, Office
Medical Softwares	3DSlicer, Mimics, Freesurfer, FSL, MRTrix3

Limited professional coding experience in C# (Unity), Java, C++ (VTK, ITK)

PAPERS & ABSTRACTS

· **Biometric and Morphological Features of the Fetal Bladder in Lower Urinary Tract Obstruction on Magnetic Resonance Imaging. New Perspectives for Fetal Cystoscopy** *In Review*
Vinit N., Grevent D., Millischer-Bellaiche A., Pandya V., Sonigo P., **Delmonte A.**, Sarnacki S., Aigrain Y., Boddaert N., Bessières B., Benchimol G., Salomon L., Stirnemann J., Blanc T., Ville Y.
Ultrasound in Obstetrics and Gynecology

· **Nervous System Exploration Using Tractography To Enhance Pelvic Surgery** *Jun. 2019*
Delmonte A., Muller C.O., Meignan P., Peyrot Q., Virzi A., Berteloot L., Grevent D., Blanc T., Gori P., Boddaert N., Bloch I., Sarnacki S.
Surgetica, Rennes (FR)

· **White Matter Multi-Resolution Segmentation Using Fuzzy Set Theory** *Apr. 2019*
Delmonte A., Mercier C., Pallud J., Bloch I., Gori P.
IEEE International Symposium on Biomedical Imaging, Venice (IT)

· **Segmentation of White Matter Tractograms Using Fuzzy Spatial Relations** *Jun. 2018*
Delmonte A., Bloch I., Hasboun D., Mercier C., Pallud J., Gori P.
OHBM Annual Meeting, Singapore (SG)

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

ADDITION INFORMATION

· Problem solving capabilities. Able to analyze a problem using a structured approach.
· Time management, organizational skills and work ethic.
· Motivated to improve my developer skill-set and to work in team-based environments.