

Curriculum Vitae



Personal information

First name / Surname / Title **Davide Boschetto, Ph.D.**
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Nationality Italian
Birthdate 22/01/1987

Work Experience

Dates **August 2017 – Today**
Role Deep Learning Specialist
Employer Microtec Innovating Wood, Mestre (Venice)
Main activities and responsibilities Implementing the latest Deep Learning trends in Computer Vision for innovative software development

Dates **July 2016 – July 2017**
Roles Data Scientist, Software Engineer, NLP Specialist
Employer Previnet S.p.A., Preganziol (Treviso)
Main activities and responsibilities Software development and NLP for healthcare solutions / medical services (Spark, Scala)
Predictive modelling, data mining (Python), Interactive Customer Care (Python/Flask/Telegram)
Heart-beat detection via camera for an Android App (Java)

Education and training

Dates **February 2013 – December 2016**
Title of qualification PhD
Principal subjects Cardiac MRI (2013), Confocal Laser Endomicroscopy (2014-2016)
Skills covered Feature extraction in digital images, digital image processing, segmentation methods (clustering, edge detection, region growing, quadtree, splines/snakes, levelsets, watershed, multiscale analysis), classification methods (random forests, SVM, neural networks, CNN, linear and naïve Bayes), image registration (ImageJ, Elastix, ANTS), pattern recognition, machine learning, image filtering
Other topics Optimization and optimal control, complex systems and data crunching, cloud computing, concurrent and distributed programming, predictive control, network theory
Topic of the Thesis Development of a Computer Aided Diagnosis Support System for Celiac Disease and Irritable Bowel Syndrome with Confocal Laser Endomicroscopy Images
Name and type of the institute IMT School for Advanced Studies Lucca (Lucca, Italy)
Supervisors Prof. Caldarelli Guido, IMT Lucca / Dr. Grisan Enrico, University of Padova

Date **3-7 June 2013**
Certificate Regularization Methods for High Dimensional Learning – RegML at Università di Genova
Main topics Computational Learning, High dimensional data analysis, Regularization methods

Dates **October 2006 – September 2009 / October 2009 – April 2012**
Title of qualification awarded Bachelor of Science / Master's Degree in Bioengineering
Principal subjects/occupational skills covered Bioimaging, Medical Biotechnologies, Biomaterials, Biological Data Signal and Image Processing, Medical Informatics, Modeling and control of biological systems, Biomedical Instrumentation, Fluid dynamics for Bioengineering
Name and type of the institute Università degli Studi di Padova, Engineering Department (Padova, Italy)
Bachelor's Thesis' Title and Supervisor Fabrication, properties and clinical applications of porous tantalum as biomaterial, Dr. Andrea Bagno
Master's Thesis' Title and Supervisor Compressed Sensing in DSC-MRI, Dr. Enrico Grisan

Conferences and Publications

Attended Conferences	Mediterranean Conference on Medical and Biological Engineering and Computing – MEDICON 2013 (Seville, Spain), IEEE International Symposium on Biomedical Imaging ISBI 2014 (Beijing, China), Joint Annual Meeting ISMRM-ESMRMB 2014 (Milan, Italy), National Bioengineering Meeting 2014 (Pavia, Italy), IEEE Engineering in Medicine and Biology Society EMBC 2015 (Milan, Italy), SPIE Medical Imaging 2016 (San Diego, CA-USA), IEEE Conference on Biomedical and Health Informatics 2016 (Las Vegas, NV-USA), IEEE International Symposium on Biomedical Imaging 2016 (Prague, Czech Republic), SPIE Medical Imaging 2017 (Orlando, FL-USA)
Awards	Educational Stipend for ISMRM 2014, Student travel grant at SPIE 2016, Winner of the AIDA-E (Analysis of Images to Detect Abnormalities in Endoscopy - Chromoendoscopy) challenge at IEEE ISBI 2016, Journal paper published at IEEE Transaction on Medical Imaging

Personal skills and competences

Mother tongue
Other languages
Self-assessment
European level ()*
English

Italian

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken Production			
C1	Advanced	C2	Advanced	C1	Advanced	C1	Advanced	C2	Advanced

(*) *Common European Framework of Reference for Languages*

Social and organizational skills	Determined, stubborn; loyal and passionate, organized, can manage stress, pressure and teamwork
Personal Strengths (<i>Infor Talent Science Behavioral</i>)	Intuitive, Modest, Systematic, Controlled, Reasonable, Efficient, Aware, Casual, Sympathetic, Sociable
Technical skills	<p>Image Processing: image registration, image filtering, multiscale and pyramidal analysis, texture analysis and object detection, outlier detection, timeseries analysis, image segmentation via filtering and deep or shallow machine learning.</p> <p>Data management: predictive analysis, statistics and hypothesis testing (t-test, KS test, ROC), data visualization, sparse data management (lil_matrix/sparse, Python/Matlab), concepts on parallel and distributed computing (Hadoop/MapReduce, deadlocks / mutual exclusion / synchronization), Consistency-Availability-Partitioning theorem, Scalability, Natural Language Processing</p> <p>Programming Languages: Matlab expert (statistics and image processing toolbox in particular), good knowledge of Python (with scipy, numpy, scikitlearn and notebook/anaconda), Tensorflow, Scala, Java and SQL, scholastic knowledge of C++. IDEs: PyCharm (Python), IntelliJ (Java, Scala), Jupyter (Python Notebook).</p> <p>Shallow Machine Learning and pattern recognition: Random Forest, Perceptron, SVM, Naïve-Bayes. Bootstrap aggregating, SGD, PCA, Regularizations methods (LASSO), variance and bias analysis (class imbalance, dataset splitting, feature ranking and selection). Applications: Sentiment Analysis, Supervised / Unsupervised (k-means, clustering, SLIC superpixels) Learning, various imaging applications (above).</p> <p>Deep Learning: Daily experience with Keras and Tensorflow. Implementation of latest vision-related trends (Tiramisu, SegNet). Fast.ai course alumnus.</p>
Driving licence	Ordinary Driving Licence (Italian's B-class licence)