PERSONAL INFORMATION

Luca Fontanili

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https://github.com/lucafon

Sex Male | Date of birth 22/01/1990 | Nationality Italian

WORK EXPERIENCE

Feb 2019-Present — Senior Engineer ML – Data Scientist

myInvenio S.R.L., Reggio Emilia

- R&D Process Mining: use of different Machine Learning models in order to give the user insightful informations about the process flow automatically discovered by the process mining algorithms
- Use of advanced Data Cleansing techniques to clean data in order to have a cleaner dataset and make better predictions/discover a better process model
- Speaker at the BPM Next 2019 event, presenting the new Automatic Business Rules Discovery using DMN standard
- Setup of different pipelines in order to manage Continuous Integration/Continuous Delivery with Docker, AWS services, Sonarqube and synchronization with internalization tools
- Full-stack Data Scientist: study, evaluation and put-in-production of different Machine Learning model to enhance the insights gathered with MyInvenio
- Tutor of a PhD student enrolled in Brain, Mind and Computer Science course at the University of Padova

Business or sector Data Science, Machine Learning, Process Discovery & Mining

Mar 2015-Jan 2019 — Computer Engineer – Software Development Leader

Ubiq S.R.L. – SIA Group, Parma/Milan

- Software Development Leader, coordinator of the Back-End development team (5+ developers)
- Development of Back-End system of different mobile applications in association with Poste Italiane (Extra Sconti, 100K+ active users per month), CartaSi (CashLessCity), Nivea (ConTATTO NIVEA), Barilla (Mio Mulino) and Samsung
- R&D Big Data: Development of the Back-End system and REST Web Services of Ti Frutta, an iOS and Android mobile app, using Data Mining and Machine Learning techniques on Cloud platform. Development of advanced and optimized algorithms to detect products on images of receipts using NoSQL databases (Solr, HBase) and OCR algorithms to read text from pictures using advanced image pre-processing techniques
- R&D Machine Learning: Study and development of a predictive model that finds similarities between texts of different images using Text Mining and ML techniques
- R&D Computer Vision: Development of a server-side binarization algorithm of raw receipt images using different image processing approaches (edge-detection, features extraction, thresholding) using OpenCV in Python
- R&D Big Data: development of a reliable tool to import data from RDBMS to Hadoop ecosystem using Sqoop, Spark, Hive and Impala
- 4+ years' experience on Java 8, lambdas and Design Patterns
- Experience with JMS and Apache ActiveMQ message broker

Business or sector Computer Engineering, Big Data, Machine Learning

Aug 2014-Feb 2015

Software Engineering Intern

Datalogic ADC Inc, 55 W Del Mar Blvd, Pasadena (CA)

- R&D Computer Vision: working on the parallelization of a Computer Vision algorithm (Zero Mean Normalized Cross-Correlation), using the NVIDIA CUDA framework on a GPU embedded in a SoC (Tegra K1)
- Development of testing programs for Computer Vision software solutions using Python

Business or sector Computer Vision

EDUCATION AND TRAINING

Sept 2012-March 2015

Master's Degree in Computer Engineering

QEQ7

University of Bologna, Bologna

- Computer Vision, Data Mining, Hadoop, IT security, AI, Java, C/C++, VHDL, Real-Time systems.

Thesis Development of parallel processing approach to compute Zero-mean Normalized Cross-Correlation. CUDA framework has been used to develop fast approach to detect characters in images, using Template Matching approach, based on Zero-mean Normalized Cross-Correlation measure.

Final Grade 110/110 with Honours

Sept 2009-July 2012

Bachelor's Degree in Computer Engineering

QEQ6

University of Parma, Parma

- Computer Science, Robotics, automatics, Computer Graphics, software engineering, Java, C/C++

Thesis A Machine Learning project based on arm gesture recognition and humanoid imitation. Arm gestures are acquired by inertial motion sensors and modelled in an OpenGL 3D virtual space. A new method based on Functional Principal Component Analysis is used in MATLAB for both a supervised clustering of training data and gesture recognition. Recognized gestures are imitated by a small humanoid robot

Final grade 107/110

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C1
	TOEFL iBT, 99/120				

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

Good communication skills gained by holding public speeches about Machine Learning's topics together with the Data Science Group in Parma

Organisational / managerial skills

Excellent social/organisational skills acquired during my experience as Team Leader. During my time in Ubiq I had to completely manage different projects with many clients, organizing work packages and distributing them across the team members.

Job-related skills	Knowledge of Design Patterns Programming languages: Java 7/8 (JMS, ActiveMQ broker, Hibernate, Kundera/HOM (HBase-Object-Mapper) ORM), Python, C/C++, CUDA (CuFFT), R, MATLAB IDE: IntelliJ, Eclipse, Microsoft Visual Studio, Jupyter, Zeppelin Technlogies: non-relational DB (Solr, HBase), Hive, Zookeeper, MapReduce, HDFS, Impala, Sqoop, Nifi, Presto, Ambari, Flume, MySQL, LDAP, Wordpress Cloud Computing: AWS (S3, Glacier, EC-2) and GCP VMs Agile: Kanban, Jira, SVN, Git, Bitbucket
Computer skills	▪ Windows, Mac and Linux operating systems
Other skills	▪ Sport: American Football, 4 years in the Parma Panthers, playing with American coaches and players. Participation in European Championship with the Italian National American Football team
Driving licence	B (own car)

ADDITIONAL INFORMATION

Publications	Arm Gesture Recognition and Humanoid Imitation Using Functional Principal Component Analysis, J. Aleotti, A. Cionini, L. Fontanili, S. Caselli, IEEE/RSJ International Conference on Intelligent Robotics and Systems (IROS), Tokyo, November 2013
Honours and awards	Bronze medal of sporting merit given by CONI.
Certifications	Machine Learning, Stanford University, Coursera, #FGYRSK7XD8XG Using Python for Research, Harvard University, edX, #f079493d7801420388179e219e2a9d63 Process Mining: Data Science in Action, TU/e, Coursera, #R95WTVQ56CQS
Projects	myInvenio - A Process Mining tool to gather insightful from business processes Ti Frutta – The very first "cash back" app in Italy that allows the customer to earn by shopping DSS – Hadoop: implementation in Apache Hadoop environment of the Distributed Solving Set algorithm for outlier detection in large distributed data sets, using the MapReduce model pysqoop: a Python package that lets you sqoop into HDFS data from RDBMS using Apache Sqoop (installable via pip) Member & Speaker of the Data Science & AI Group in Parma Other Artificial Intelligence and Machine Learning projects available at my Git repo.
Personal details	In compliance with the Italian legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.