ANDREA CINESI

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SUMMARY

I am a student in the Master Degree in Computer Engineering enthusiastic about building a long-term career in Machine Learning and Big Data.
During the last two years of my studies, I have developed a real interest in Big Data and Machine Learning area and in the way we can get useful insights from data which could improve the services of cities and, even more, the everyday lives of people.
Alongside my interest in these fields, I also have a strong desire to move abroad in Dublin, a city which has always fascinated me for its history and its great folklore.
I think that writing the preparation of my thesis abroad in a Big Company in Dublin, like IBM, that is very focused on Big Data, would be a great opportunity, because I would have the possibility of facing real life problems and of learning how a company works from a different point of view.
I am currently attending online courses to improve my skills in Machine Learning and Big Data tools such as Apache Spark and scikit-learn.
During my spare time, I like playing soccer and watching TV series. I am also passionate about cooking and I like having dinners with my friends during the weekend.

EXPERIENCE

JUNE 2016 TO NOVEMBER 2016 | DEVELOPER ANALYST | ITQUADRO BOLOGNA, EMILIA-ROMAGNA

During the job experience, I had the opportunity of being involved in everyday activities of the company such as customers relation and activities schedule,
As developer Analyst, the main project was about the design and the development of a web app for the management of companies' invoices.
Some of the main requirements of the app were: automatically generate PDF documents of invoices based on company's data, manage deadlines during the entire billing period by alerts and emails, show an overview of company's outcomes and incomes, collect in a reliable and safe way company's billing data.
The web app was developed in C# using the ASP .NET MVC framework and involved the knowledge of SQL language and some frontend tools such as Bootstrap and RAZOR syntax.
In-depth analysis of frameworks: ASP .NET MVC, Bootstrap
In-depth analysis of languages: SQL, C#, HTML, CSS, JavaScript

MAY 2015 TO JUNE 2015 | INTERNSHIP | CASY CENTRE FOR RESEARCH ON COMPLEX AUTOMATED SYSTEMS BOLOGNA, EMILIA-ROMAGNA

The internship was held at CASY of Bologna, which is a centre specialized in studying of control of complex dynamic systems.
The main achievement was getting familiar with ROS framework, which is a set of software libraries and tools that support the development of robot applications, and then managing to apply my knowledge in a simulated environment, known as GAZEBO, suitable for realistic simulation of robotics scenario.
During the last month, I had some extra time, so I decided to approach to visual odometry, the process of determining the position and orientation of a robot by analysing the associated camera images.
In-depth analysis of frameworks: ROS
In-depth analysis of languages: C++

EDUCATION

2016 – UP TO NOW	MASTER OF SCIENCE COMPUTER ENGINEERING	ALMA MATER STUDIORUM UNIVERSITY OF BOLOGNA BOLOGNA, EMILIA-ROMAGNA, ITALY

Exams: Infrastructures for Cloud Computing and Big Data, Operative Systems, Artificial Intelligence, Languages and Computational Models, Operative Research, Computer Security, Data Mining and Big Data, Computer Vision, Embedded Systems, Intelligent Systems, Project Management and Innovation, Intelligent Systems.

2012 – 2016	BACHELOR OF SCIENCE COMPUTER ENGINEERING 100/110	ALMA MATER STUDIORUM UNIVERSITY OF BOLOGNA BOLOGNA, EMILIA-ROMAGNA, ITALY

Official duration (years): 3
Thesis title: Installation of navigation stack on ground rover and application of Kinect in human-robot leashing
Thesis subject: AUTOMATIC CONTROLS T | Effort 4 months
The thesis is integrated into a European project called SHERPA. The goal of SHERPA is to develop a mixed ground and aerial robotic platform to support search and rescue activities in a real-world hostile environment like the alpine scenario.
More specifically, I worked with a ground rover which was responsible for supporting the human operator during search activities.
During the first months, I dealt with the installation and the setup of a navigation stack, which consists in all those modules responsible for handling data from sensors (IMU, laser scanner), sending commands to rover's track and managing the collision-avoidance system.
The last period was dedicated to the development of a module to allow the rover to identify the human operator position and then follow it.
In-depth analysis of frameworks: ROS
In-depth analysis of languages: C++
Further info: http://www.unibo.it/en/research/projects-and-initiatives/Unibo-Projects-under-7th-Framework-Programme/cooperation-1/information-and-communication-technology-ict-1/sherpa

PROJECT WORKS

Artificial Intelligence
The activity is about adding to a humanoid robot, known as NAO, the capability of interpreting the speech of a person and then intelligently plan a set of actions to achieve a goal based on the content of the speech.
To recognize the commands through the voice, it was used a library for the natural language processing called NLTK, which made possible to remove useless parts from the speech and to turn the words in a base form called stem.
The plan was obtained using a strips planner, a simple linear solver, which it's capable of determining which sequence of actions can lead the robot to the goal based on the goal statement itself and the description of the possible actions of the robot.
Keywords: Python, NLTK, Google Speech API, NAO robot, STRIPS.
Further info: https://github.com/Acinesi/nao-strips-planner

Data Mining and Big Data
The activity was about the analysis and the implementation of one of the best-known algorithm for biclustering, Cheng -Chung.

This type of data mining technique is mostly used in genetic for discovering gene sets which shows similar behaviour under experimental conditions and which could be related to human disease.
The algorithm was implemented in Python and involved some data manipulation libraries like NumPy and Pandas.
The final benchmarks show very good performance in terms of quality and speed.
Keywords: Python, NumPy, Pandas, Biclustering.
Further info: https://github.com/Acinesi/py-chengh-church

LANGUAGES

ITALIAN	Mother language
ENGLISH	Fluent in reading, writing and speaking.

SKILLS

LANGUAGES	Python, SQL, Prolog, C, C#, Java, JavaScript, Typescript.
FRAMEWORKS	ASP .NET MVC, ROS.
LIBRARIES	NumPy, Pandas, Matplotlib

ACTIVITIES AND INTERESTS

Participation in ICARO – School of Entrepreneurship
I've been working on this project for 3 months, which consists in realizing innovative ideas and practical projects to respond to real problems placed by national and international companies.
I'm one of the 40 students, which have been selected through an initial process that involved more than 200 students of University of Bologna.
The main goal of ICARO is introducing students to techniques, methodologies and the most common problems that come out in a team working environment, by teaching the best practices and the fundamentals of the Design Thinking.
During this period, we are supported by a team of university teachers, entrepreneurs and business experts in the role of mentor and we have the possibility to attend workshops about the world of startups, the role of project manager and others critical business topics.
Keywords: Design Thinking, Team Working, Entrepreneurship.
Further info: http://www.giardinodelleimprese.it/per-studenti-universitari/

DATAQUEST – Data Science and Data Engineer path
I am attending two learning paths about Data Science and Data Engineer offered by DATAQUEST platform.
The course focus on teaching all the tools and technologies involved in a data pipeline: data analysis and data visualization best practices, machine learning concepts, tools for working with large and heterogeneous dataset, like Spark.
The main idea of the course it's to give the knowledge, theory and practice, about tools that are being used nowadays in a data-oriented environment.
Keywords: Data Science, Data Engineer.
Further info: https://www.dataquest.io

Participation in MEDDAYS 2018 – Mediterranean Days
During these days at Université of Côte d'Azur, we were introduced to research activities with a focus on international masters, and we attended to general presentations and scientific visits of research teams.
I had the opportunity to get in touch with some interesting people from the research area who give me important advice that helped me to better understand my prospects.
I did appreciate listening to experiences of more than 35 students from the Mediterranean area.
Keywords: Université of Côte d'Azur, Research activity.
Further info: http://leat.unice.fr/MEDDAYS2018/#page=home