

Andrea Castegnaro

Personal Information

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Personal Statement

As an enthusiastic .Net developer my goal is to pursue my personal growth becoming a more skilled professional to deliver the best product. I am skilled in C# and a fast learner who follows best practices such as SOLID. I want to improve my career in software development and to do that I am actively seeking positions as Junior web developer because I have a keen passion for design patterns. I am self-motivated and a flexible team player with innovative but analytic thinking, confident in adapting to different roles and able to quickly cope with critical situations to meet challenging goals.

Work Experience

Elettric80 S.p.A

Software Developer

Via G. Marconi, 23 42030 Viano (RE) Italy

June 2013 –

present

I am responsible for the software architecture, software development and deployment of the software required for the current project assigned. Working in a small size team we adhere to a development methodologies similar to Agile. Key responsibilities on developed projects:

- development of control system application (LGVManager) for automated guided vehicles using NHibernate, NLog
- development of Elettric80.Client user interface using EF5, WPF, WCF
- development as DBA of a warehouse management system (WMS) based on RDBMS

Minor Work Experience.....

Cosylab d.d.

Training Project

Teslova ulica 30, SI-1000 Ljubljana, Slovenia

September 2013

Purpose of the project has been the design, implementation and testing of a serial communication (UART) interface using FPGA logic for accessing components on a Wishbone bus. The component was designed and implemented using VHDL language. The developed component was tested first using a simulation testbench and then also using a general purpose Xilinx FPGA development board.

Research Experience

My research area is experimental particle physics and I started from 2011 until summer 2012. I have worked on a hardware project in the frame of the ATLAS Fast-Tracker (FTK) effort.

Fermilab

Summer Internship

Batavia, IL, USA

June 2012 -September 2012

DC bits study

Using single muon and pion Monte Carlo samples I have produced the tracking performance results for several FTK system configuration. The main aim has been exploring the improvements made by the use of an innovative technique called "Don't care(DC)" bits developed to improve track candidates identification during pattern recognition stage. My study showed an expected improvement in

efficiency for the FTK system.

INFN – LNF

Undergraduate Fellowship

Pixel Clustering Algorithm

The major result of my research has been the study, design and implementation of a fast general-purpose algorithm for high-throughput pixel clustering for the ATLAS-FTK project. The algorithm, placed at the input stage of the entire system, has the main characteristic of having a processing time that scales linearly with the amount of data. In order to evaluate the overall impact inside the FTK system I wrote in C++ an high level simulation of the algorithm as an add-on for FTK framework. A first version of the firmware has been developed in VHDL using a Xilinx Spartan 6 family FPGA as the target hardware. The implementation made it possible to estimate the achievable speed (clock period) given the FPGA resources. With respect to the estimation we achieved a maximum grid size that can satisfy latency requirements and input rate data.

Frascati, Rome, Italy

May 2011 – May 2012

Education

IFOA

Master in C#, Sql Server, Software Solutions

Reggio Emilia, Italy

January 2013–May 2013

Selected Topics:

- Architecture and data access services, LINQ, ADO.NET
- Web services and development with Visual Studio 2010
- Development of applications with Windows Presentation Foundation
- Windows Communication Foundation data services
- MVC design for Web applications and development with Asp.net, Javascript, CSS

Cracow University of Technology and Institute of Nuclear Physics

International School of Trigger and Data Acquisition (ISOTDAQ)

Cracow, Poland

February 2012

University of Rome II

MSc. Physics

Rome, Italy

2009–2012

final grade: 110/110 *cum laude*

thesis title: *The Fast-Tracker trigger upgrade for the ATLAS experiment: real-time pixel clustering for high instantaneous luminosity*

advisors: Prof. Roberto Messi, Dr. Alberto Annovi, Dr. Matteo Beretta

link: <https://www.dropbox.com/s/rlhyiyu5vbycgv8/TesiFin.pdf>

University of Rome II

BSc. Physics

Rome, Italy

2006–2009

final grade: 107/110

thesis title: *Study and implementation of a Lorenz system: Aperiodic Non-chaotic Attractor (ANA)*

advisor: Prof. Arnaldo Florio

Liceo Scientifico “Vito Volterra”

High school degree

Ciampino, Italy

2002–2006

final grade: 90/100

List of Publications

[1]: **A fast hardware tracker for the ATLAS trigger system**

J. Anderson *et al.*, Nucl.Instrum.Meth. A718 (2013) 258-259

[2]: FTK: A fast track trigger for ATLAS

J. Anderson *et al.*, JINST 7 (2012) C10002

Awards

2013: Master in C#, SQL Server, Software Solutions

I won a national call where twenty newly graduated could take part of Master program in software development funded by a well-known Italian multinational company leader in the industrial automation field

2011-2012: INFN Undergraduate fellowship

One-year fellowship given by INFN to finance outstanding undergraduate students during their master thesis project

2006–2009: Italian Ministry of Education Merit Scholarship

Three-year scholarship awarded by the Italian Ministry of Education to support outstanding students during their Bachelor's Degree

Computer Skills

operating system: Windows, Windows Server, Linux

programming: C#, C++, C, SQL, VHDL, Bash

software: Microsoft Visual Studio, Microsoft Sql Server Management Studio, Xilinx Suite Design, ROOT, MATLAB, LabView, Ni Multisim

relevant microsoft technologies: .NET 3.5-4.0, Entity Framework, MSMQ, WPF, WCF, ADO.NET, LINQ

Languages

Italian: Mother tongue

English: TOEFL iBT Reading(26)Listening(27)Speaking(20)Writing(20)

Interests

I have a great interest in music: I play guitar since I was twenty and I am currently taking private singing lessons. I have an interest in microcontrollers and by taking advantage of my electronics and programming studies I have developed many small projects using an Arduino platform. I have a deep passion for videogames development; I learnt how to use Unity to develop small indie games. I played basketball for seven years and now in my free time I like to go swimming or running. Since I was young I have spent the summer months always traveling visiting places like USA, Africa and a number of European Countries.