SIMONE BARTOLI

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SUMMARY

I am a computer science passionate with a master degree in computer science engineering at the University of Bologna. I have orientated my studies towards the field of Artificial Intelligence, mainly focusing in Machine Learning, Computer Vision and Image Processing.
I have been programming since High School and I have taken part in many different projects, starting from low level programmation to Object-oriented and Component-oriented programming.

EDUCATION

University of Bologna Sept. 2018 - Mar. 2021
Master degree Computer Engineering 2021
I have focused mainly on Artificial Intelligence and Computer Graphics exams. In particular, I attended courses of Artificial Intelligence, Intelligent systems, Computer Vision, Image Processing, Machine Learning and Computer Graphics.
During these years I growth a deep passion for Computer Vision and Image Processing projects, which leaded me to choose Computer Vision as the topic for my master thesis project.
Final mark: 110/110 cum laude
Thesis: Deploying deep learning for 3D reconstruction from monocular video sequences

Universitat Politecnica de Valencia Jan. 2019 - July 2019
Master degree Informatics Engineering
A 6 months Erasmus+ exchange.
After 6 months abroad I have incremented both professional and human skills, improving especially my communication abilities and my teamwork propension.
Morever, thanks to the more practical approach provided by the Spanish University, I was able to deepen my knowledge about both Computer Vision and Computer Graphics, developing many interesting projects.

University of Bologna Sept. 2015 - Oct. 2018
Bachelor degree Computer Engineering 2018
Final mark: 107/110

EMPLOYMENT

Zuru Tech, *Junior C++ Software Engineer*, Modena July 2021 - Current
Full time job in the field of 3D Computer Graphics. The whole project exploits on the edge technologies, in particular, it uses one of the most rising 3D rendering engines, such as Unreal Engine 4. As a C++ Software Engineer, I am responsible of developing new features within an innovative BIM (Building Information Modeling) software. My goal is to provide optimized, scalable, reusable and modular solutions, exploiting software engineer design patterns and principles. I am also improving my knowledge about the Agile/Scrum working methodology, as well as Git and GitLab version control systems.

Cluster Reply, *IT Consultant*, Bologna May 2021 - June 2021
A full time job focused on using Microsoft technologies to manage and carry out web applications based on clients needs. The main technologies exploited for this job are the ASP.NET framework (Using C# as programming language) and Microsoft SQL Server (Using SQL and Transact-SQL).

Eyecan.ai, *Computer Vision Engineer Intern*, Bologna Sept. 2020 - Mar. 2021
Internship for the final Master thesis.
The main project carried out during this experience is about deploying Deep Learning for 3D reconstruction from monocular video sequences. The aim of this project is to compare the Structure from Motion + Multi-View Stereo pipeline with an innovative Data-driven technique which exploits Convolutional Neural Networks for monocular depth estimation. The implementation has been written in Python exploiting the PyTorch and PyTorch-Lightning libraries.
The second project concerns the implementation of a Python library in order to interact with a Zivid 3D sensor with the aim of gathering accurate RGB and Depth images.

Deasoft s.r.l., *Software Engineer Intern*, Bologna Dec. 2017 - June 2018
A 6 months internship in a software house in which I took part in the developing of a Mobile App and a Web Application, implementing modules for both the backend and the frontend side, using cross-platform frameworks and RDBMS storage systems, like MySQL and Microsoft SQL Server.

SKILLS

LANGUAGES

Italian: native

English: professional knowledge

IELTS certification: overall 6.5

Spanish: professional knowledge

PROJECTS

AI Tablut Feb. 2020 - June 2020
For the Artificial Intelligence exam, I have realized an Intelligent player able to find smart moves to win the Tablut game. The solution is written in Java with the help of the AIMA library.

Computer Vision and AR Feb. 2020 - June 2020
For the Computer Vision exam, I have taken part of a team for the realization of an Augmented Reality project. The aim was about superimposing an Augmented Reality layer over a detected object in the scene. The project has been developed using the Python programming language. (in particular the OpenCV and Numpy libraries).

ArtigianAudio App Feb. 2020 - Current
ArtigianAudio is a Mobile App realized using the Unity Framework and the Google AR Core library.
The aim is to place Hi-Fi rack furnitures within an Augmented Reality scene. In doing so, the customers will be able to see how does the rack fit in their own rooms. Moreover, it will be possible to build up personal racks by componing different pieces together.

ArtigianAudio Jan. 2019 - Current
Starting from scratch, I have designed and developed a responsive e-commerce website for Bartoli&Sassetti s.a.s.
In order to develop and manage the software I have been using web technologies as PHP, HTML, CSS, JS, JQuery and MySQL for the storage of Data.
Website: https://www.artigianaudio.it

Perudo FPGA Dec. 2018 - July 2019
Perudo is a simple videogame project concerning low-level programming over an FPGA.
VHDL is the programming language used to synthetize the code on a FPGA; addittionally, a RS232 serial communication is used in order to tell to a Unity view how to show data.
Link: https://github.com/bonacciog/Perudo_FPGA