Costanza Maria Improta

Research Assistant, Master's in Computer Science at ETH Zürich | Master's Thesis at Disney Research

Contacts

Weinbergstrasse 97,
8006, Zürich
+41 78 68 78 797
costanza.improta@live.it
linkedin.com/in/cmimp
GitHub: cmimprota

Programming Competencies

High Competence:
Python
C++
Java
Tensorflow
PyTorch
PyTorch3d
LaTeX

Medium Competence:
C
OpenGL
HTML5 & CSS3
JavaScript & JQuery
SQL
MATLAB
SoapUI
Django

Beginner:
Verilog
Swift
Drools

Tools

Blender
Affinity
Unity
Meshlab

Certificates

Google Project
Management:
Professional Certificate

MOOCs

CS229
CS231n
CS224d
fast.ai

Education

ETH Zürich
09/2019 - 10/2021

MSc in Computer Science - Visual Computing track

Achieved a 6 (100%) in *Deep Learning for Computer Vision*, *Data Science in Techno-Socio-Economic Systems* and *Shape Modeling and Geometry Processing*

- Strong interest in Data Analysis and Visualization, ML, Computer Vision and Image Processing, NLP and UX/UI.
- *PandeML* - built and compared different ML models to correctly predict the COVID-19 pandemic in various countries.
- *CSR: Character-level Sequence Representation for Classification of Tweets with Misspellings* - developed a character-level sequence representation model for sentiment classification of user-generated social media posts.

The University of Manchester
09/2015 - 06/2019

BSc in Computer Science with Industrial Experience - First Class Degree

Certificate of Excellence, awarded to top 10% of graduating students

- Third Year Project - "A Dense Captioning Approach to generate a Descriptive Paragraph of an Image"
- *Eventlite* - developed in a team a MVC web application for event management, using the Spring framework, Google and Twitter APIs.
- *StendhalGame.org* - as part of a team, tested, debugged, built, developed and deployed a multi-user, multi-threaded, client-server open source game containing 6000+ Java classes and 1800+ test cases using Eclipse, Git, Apache Ant, Jenkins and JUnit.
- *ShelfShare* - implemented in a team a platform on which UoM students may securely trade their goods.

Work Experience

Master's Thesis in Industry (Research)
04/2021 - 10/2021

Disney Research Studios, Zürich, Switzerland

- Developed a state-of-the-art neural rendering pipeline, to improve rendering quality of coarse image-based 3D reconstructions, achieving a 5.75.

Programming Research Assistant
09/2020 - 11/2021

ETH Zürich, Zürich, Switzerland

- Supported researchers in coding experiments, data analysis and empirical research.

Software Engineer
06/2019 - 07/2019

The University of Manchester, Manchester, United Kingdom

- Built a data-heavy, web-based application, including restricting access to certain views.
- Identified missing features and access limitations.
- Designed and developed UI.

Software Engineer
07/2017 - 07/2018

ISA Software, Paris, France

ISA Software is an Air Traffic Management Consultancy Company.

- Researched and evaluated ML models to reliably predict air traffic collisions.
- Developed and shipped an interactive simulation tool to display and analyse air traffic.
- Developed an automated track analysis and anomaly detection tool.

Web Developer, Business Analyst, Italian Interpreter
07/2016 - 08/2016

Wyng43, Hong Kong, HK

- Designed and developed a website for Wyng43.

Qualifications

Google Summer of Code 2020

Google Developer Challenge Scholarship

LANGUAGES

Italian:
Native speaker

English:
Bilingual IB Diploma
IELTS
CAE

French:
DELF B1

German:
A2

Chinese:
A1

COMPUTER SCIENCE
UK's Top 10 CS Undergraduate of 2018
IBM UTC Prize

MATHEMATICS
"Best in Year" & "Silver" in UKTM (2013)
"Best in School" in Giochi Matematici 2012

OTHERS
Computer Science, Italian and English "Best in Year" awards at SGBIS in 2015

Hackathons

Finalist at HackZurich 2020

Given talks

IBAEM Regional Conference 2014

Volunteering & Relevant Activities

AMZ Racing - Public Relations Officer (PRO)
09/2020 - present
Akademischer Motorsportverein Zürich - ETH Zürich Formula Student Project

- Marketing & PR responsible, focusing on sponsorships, networking, events and exhibitions.
- Managing all social media accounts, and devising an effective social media strategy.
- Developing and maintaining both the AMZ driverless and AMZ electric websites.
- Previously a core team member in the driverless division, focusing on operations.
- Organised the AMZ 2021 roll-out to present our newly built cars for the 2020/2021 season. Mainly focused on marketing & PR, indoor show and media generation.

PASS 1 Coordinator
07/2018 - 06/2019
The University of Manchester School of Computer Science

- Managed PASS sessions for 250+ year one students and their second year leaders.
- Led and ran debrief sessions for second year PASS leaders to help them develop and improve their mentoring sessions.
- This improved organizational, communication and public speaking skills.

STEM Ambassador
01/2016 - 06/2019
STEMNET

- Organised activities and talks to inspire young students to pursue a career in a scientific subject and to narrow down the gender gap by engaging girls too.
- Worked both in a team and on my own, which gave me the chance to improve my organisational, communication and oratorical skills.

Student Ambassador, Welcome Hero & HelpDesk Assistant
09/2016 - 06/2019
The University of Manchester

- Was a reference point for the new students, pointing them in the right direction and making them feel welcome.
- Worked in close contact with members of Academic Staff during Interview Days, talking to prospective students about my current experience, taking them for a tour of the building and answering related questions.
- Through this, I developed leadership, communication and customer service skills.

PASS Leader
09/2016 - 06/2017
The University of Manchester School of Computer Science

- Along with my co-leader, held weekly one-hour meetings with a group of tutees from the year below, supporting their learning process through visual or kinaesthetic activities and giving advice relative to university or life issues. My leadership and communication skills benefited from this.

Manchester Robot Orchestra
11/2015 - 2016
Manchester European City of Science 2016

- Participated in the designing phase - my role was to brainstorm about the various tools and technologies that could be used in order to be time and cost-efficient. This project has also featured contributions from Siemens and The Halle Orchestra.