

# Manuel Pagliuca

SOFTWARE ENGINEER JUNIOR · M.Sc. STUDENT IN COMPUTER SCIENCE

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## Skills

<b>Programming languages</b>	C/C++, Java, TypeScript, JavaScript, C#, Scala, CUDA C, Python, SQL, LaTeX
<b>Languages</b>	Italian ( <i>native</i> ), English ( <i>fluent</i> )
<b>Frameworks</b>	Angular, Qt
<b>Technologies</b>	Node.js, MongoDB, RxJS, GraphQL, RESTful, gRPC, MQTT, MySQL, Protocol Buffers
<b>Tools</b>	Git, Vim, bash/zsh, JIRA, BitBucket, Notion

## Experience

### Verve Ventures

Zurich, Switzerland

SOFTWARE ENGINEER INTERN

Feb. 2023 - Aug. 2023

- Developed a reusable JS script for AEOI (Automatic Exchange Of Information) of private and corporate investors. Utilized parsing techniques to extract essential data from approximately 1,200 financial accounts and generate an XML file in compliance with the CRS (Common Reporting Standard).
- Implemented a responsive manager that handles proprietary tables configurations. The manager allows the user to add, edit or remove an element from the configurations. An element can be edited by clicking on a row in the table, which will open a related modal for editing/delete the item.
- Extended the Azure and AWS file storage services with new functionalities.
- Designed and implemented a drag-and-drop development tool, it allows the uploading new versions of existing documents.
- Fixed several bugs present in the production environment.
- TypeScript, JavaScript, Scala, Angular, GraphQL, RxJS, Azure Storage, AWS Storage, MongoDB, Visual Studio Code, IntelliJ IDEA

### Altec S.R.L.

Arona, Italy

SOFTWARE DEVELOPER TRAINEE

Feb. 2021 - Jun. 2021

- Integrated *DiffPDF* tool in the main project, it visualizes the differences between the prices of new and old air handling units.
- Designed and developed a tool for migrating the customer's offers from the local relational database to a new remote non-relational database.
- C++, SQL, Microsoft OLE DB, ADO.NET, Microsoft Foundation Classes, Microsoft SourceSafe, Microsoft Azure Cloud.

## Education

### University of Milan

Milan, Italy

MASTER'S DEGREE IN COMPUTER SCIENCE

October, 2020

- Master's thesis - "Efficient schematic-based representations of high-resolution polygonal surfaces anisotropic subdivision and displacement maps".

### University of Oriental Piedmont

Vercelli, Italy

BACHELOR'S DEGREE IN COMPUTER SCIENCE

October 2017 - December 2020

- [Bachelor's thesis \(abstract & slides\)](#) - "Fix-It: Stream processing on event-driven system for managing public disservices".

## Projects

### SETA - SELF-driving TAXI service

Milan, Italy

PROJECT FOR THE COURSE OF DISTRIBUTED AND PERVASIVE SYSTEMS

September. 2022

- Designed and deployed peer-to-peer system that handles self-driving taxis for the citizens of a smart city.
- Java, Multi-threading, gRPC, MQTT, Protocol Buffers, REST API, IntelliJ IDEA

### L-system

Milan, Italy

PROJECT FOR THE COURSE OF ARTIFICIAL INTELLIGENCE FOR VIDEOGAMES

July. 2022

- Lindenmayern system for procedural generation of tree using pseudo-random integers for enhancing the believability.
- [Report](#) and showcase [video](#) (English).
- C#, Unity.

### 3D Subdivision of surfaces

Milan, Italy

COURSE OF COMPUTATIONAL GEOMETRY

March. 2021

- Developed a 3D application for subdividing polyhedra surfaces into free-form solids and fragmenting triangular primitives using tessellation.
- Hosted [website](#) (Italian) from math department and showcase [video](#).
- C++, ImGui, Linear algebra, GLSL, Visual Studio.