# Lorenzo **Pegorari**

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#### **Education**

#### **Polytechnic University of Milan**

Cremona, Italy

PURSUING A BACHELOR'S DEGREE OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING

Sep. 2021 - present

#### Scientific High School "Gaspare Aselli"

Cremona, Italy

HIGH SCHOOL DIPLOMA IN SCIENTIFIC STUDIES, GRADUATED WITH 3.25/4.0 GPA

Sep. 2016 - Jun. 2021

## Experience \_\_\_\_\_

#### **Google Summer of Code 2025**

United States, Online

GSoC'25 Contributor for the Open Source organization BRL-CAD

May 2025 - Sep. 2025

- Chosen among 1,280 accepted contributors against 15,240 participants (~8.4% acceptance rate).
- Enhanced the lightweight object-oriented API MOOSE, enabling applications to easily interface with the Geometry Editing Library (libged).
- Developed a console widget for Arbalest, BRL-CAD's prototype GUI, giving users access to libged's commands.
- Engineered a new tree-based representation for geometry file objects, cutting file-opening time by an average of 66% (with peak optimizations over 97%) and significantly improving code clarity and maintainability.
- Technologies used: C, C++, Qt6.

### Side Projects \_\_\_\_\_

#### **OPEN SOURCE**

BRL-CAD Online

Open Source Developer Mar. 2025 - present

- Selected as a GSoC'25 Contributor.
- Contributed to BRL-CAD's prototype GUI <u>Arbalest</u> and lightweight, modular, object-oriented API <u>MOOSE</u>.
- Technologies used: C, C++, Qt6.

#### PERSONAL PROJECTS

#### Simply Colorful - Theme for the note-taking application Obsidian

Online

Oct. 2024 - present

Creator | Main developer | Main designer

- This theme has gathered over 6000 downloads (as of August 16th, 2025).
- Technologies used: SASS, CSS, Grunt (JavaScript task runner).

#### Skills

**Front-end** SASS, CSS3, HTML5, JavaScript

**Software engineering** C, C++, Python3, Qt6 **Other languages** RISC-V, MIPS, LaTeX

**Softwares** Git, GitHub, Google Sheets, Microsoft Excel, Microsoft Word, Microsoft Powerpoint

**Languages** Italian (Native), English (C1 Proficiency)

#### Certificates\_

2020 **Cambridge English B2 First,** Overall Cambridge English Scale score: 180 (CEFR Level C1)

ID: B2962291

2019 **Cambridge English B1 Preliminary**, Overall Cambridge English Scale score: 163 (CEFR Level B2)

ID: 196IT0600133

## Competitions \_\_\_\_\_

23 **ITACPC 2023**, participated as a team of 3 people and placed 49th out of 218 teams

Online

#### Extracurricular Courses\_

#### Worlds generated by code: The Generative AI

Polytechnic University of Milan

8 HOURS COURSE HELD BY ANDREA BELLI, ENTERPRISE ACCOUNT EXECUTIVE AT LINKEDIN

Nov. 24th. 2023

- Learned the basics of how Large Language Models operate.
- · Learned the basics of Prompt Engineering to obtain as fast as possible the clearest output from a LLM.
- Discussed the ethics, the opportunities and the risks of using LLMs.

Boolean Data Week Online

8 HOURS WORKSHOP HELD BY BOOLEAN

Nov. 20th-24th, 2023

- Learned the basics of Data Analysis with Python and Tableau.
- Modified, cleaned and visualized an example dataset of 930k movies to find insights into cinematography.

#### LinkedIn to look for a job

Polytechnic University of Milan

Nov. 17th, 2023

2 HOURS SEMINARY HELD BY ANDREA BELLI, ENTERPRISE ACCOUNT EXECUTIVE AT LINKEDIN

• Learned to create the perfect LinkedIn profile as a support for finding the desired job.

Boolean Coding Week Online

8 HOURS WORKSHOP HELD BY BOOLEAN

Oct. 16th-20th, 2023

- · Learned the basics of HTML, CSS and JavaScript for front-end web developing.
- Created 3 examples of web games (Minesweeper, Stacker and Frogger).

#### Rapid Prototyping: Open Data e Machine Learning (GitHub Repo)

Polytechnic University of Milan

4 HOURS WORKSHOP HELD BY <u>JACOPO DE STEFANI</u>, PH.D IN TIME SERIES ANALYSIS AND FORECASTING THROUGH MACHINE

Dec. 16th, 2022

LEARNING

- Modified, cleaned and visualized an example dataset of 5110 people's personal and medical indormation using Python, Jupyter Notebook, pandas and seaborn.
- · Prototyped a ML model capable of predicting an individual's chance of having a stroke using scikit-learn.

#### **Artificial Intelligence: Instructions for use**

Polytechnic University of Milan

2 HOURS SEMINARY HELD BY <u>JACOPO DE STEFANI</u>, PH.D IN TIME SERIES ANALYSIS AND FORECASTING THROUGH MACHINE

Dec. 13th, 2022

• Learning • Learned the basics of AI (different dataset requirements, instance-based and model-based learning, data management, etc.).

- Learned the basic inner workings of ML (linear regression, decision trees, Artificial Neural Networks, etc.).
- Discussed the ethics of ML.

#### Kotlin and Jetpack: For modern and efficient Android apps

Polytechnic University of Milan

8 HOURS COURSE HELD BY <u>LUCIANO BARESI</u>, PROFESSOR AT <u>POLYTECHNIC UNIVERSITY OF MILAN</u>

Nov. 22nd & 25th, 2022

- Learned the basics of Kotlin and Jetpack Android, the structure of a typical Android app and how to use the official IDE Android Studio.
- Created a simple application.

## Beyond The Subject: Conceptual changes induced by artificial intelligence and other natural or artificial sciences

Polytechnic University of Milan

2 HOURS SEMINARY HELD BY GIANLUCA MAGNANI, BA OF PHILOSOPHY AT **UNIVERSITY OF MILAN** 

Feb. 19th, 2021

• Discussed the philosophical mutations in the meaning of the word "subject", and many correlated terms such as "rationality" and "free will", caused by the persuasive impac of AI on our means of understanding.