Gabriele Benedetti

28.01.1999

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gabri.xyz

gbene

LANGUAGES

Italian
Native

English
Native

Chinese
HSK3

German
A2

SOFTWARE

GIS (>100h)
●●●●○
QGIS, ArcGIS, SAGAGIS

Agisoft Metashape (>100h)
●●●●○

3D geological modelling (>50h)
●●●○○
SKUA GOCAD, MOVE

CloudCompare (>20h)
●●○○○

CAD (>20h)
●●○○○
KiCAD, FreeCAD

PROGRAMMING LANGUAGES

Python (>1000h)
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JavaScript (>20h)
●●○○○

JuliaLang (>20h)
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MATLAB (>20h)
●●○○○

C++ (>10h)
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EDUCATION

University of Milano Bicocca 110/110 cum laude (projected) (Oct 2020 - Present)
MSc Geology and Geodynamics

The Masters degree in Geology and Geodynamics establishes a basis to analyze and understand deep geological processes at the local and regional scale using both surface and subsurface data.

- Strengthened core geology concepts by following numerical and data driven courses such as applied geophysics, 3D geo-modelling and GIS/remote sensing.
- Developed an open source 3D modelling geological software written entirely in Python as Master thesis.

https://github.com/andrea-bistacchi/PZero

University of Milano Bicocca 107/110 (Oct 2017 - Oct 2020)
BSc Geological Sciences and Geo-technologies

The Bachelors degree in Geological Sciences and Geo-technologies has the aim to lay a solid methodological background in all fundamental disciplines of the Earth Sciences.

- Sparked an interest for modern approaches, such as 3D modelling and coding by having hands on experience with different 3D manipulation software and subjects.
- BSc Thesis: *Photogrammetric techniques applied to invertebrate paleontology*

https://gabri.xyz/projects/fossils/

WORK EXPERIENCE

PZero software developer at PRO ITER Ambiente s.r.l. (May 2022 - Present)

- Created new tools and functions for the PZero 3D geological modelling software to streamline the output of geological models for CAD/BIM environments.
- Involved in non academic geological applications by working with a team of experts in civil and environmental engineering.

Agisoft metashape python API support (Oct 2019 - Nov 2019)

- Hired to define a pipeline and write python scripts to help calculate the difference between two distinct 2.5D models of artificial slopes before and after a given event directly in Agisoft Metashape.
- Apply and adapt pre-existing knowledge of both Agisoft and Python.

https://gabri.xyz/projects/auto-slope/

INDIPENDENT PROJECTS

Electronic Compass (Dec 2019 - Present)
Open-source electronic geological compass.

- Multidisciplinary passion project that aims to create a low-cost, open-source electronic geological compass.
- Gained many different skills ranging from sensor characterization and calibration procedures, electronic circuit planning, project management and coding in C++.

https://gabri.xyz/projects/ec/

RocPy (Feb 2021 - Present)
Roclab inspired python program

- RocLab inspired software created to increase the overall accessibility of the program (available only in Windows) and to modernize it's interface.
- Adopted Python libraries such as PyQt and to apply and coded many different theoretical concepts learned during my academic path.

https://gabri.xyz/projects/rocpy/

GPR 3D visualization (May 2022 - Jun 2022)
New visualization method for GPR data

- Devised a new method to visualize in 3D space Ground Penetrating Radar data acquired during the Applied Geophysics course.
- Learned how to extrapolate data from SEGY-Prism2 files and to properly elaborate and visualize GPR data using Python specific libraries such as obspy, scipy, numpy and pyvista.

HOBBIES AND EXTRACURRICULAR ACTIVITIES

Gardening
Enjoy taking care of plants, vegetables and flowers

Hiking
Capable excursionist; participated in hikes and excursions around Italy with groups of diverse people

Woodworking
Designed and crafted wooden objects and tools for personal use, repairs and gifts