Gabriele Benedetti

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

CloudCompare (>20h)
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CAD (>20h)
●●○○○
KiCAD, FreeCAD

PROGRAMMING LANGUAGES

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

JuliaLang (>20h)
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MATLAB (>20h)
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C++ (>10h)
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EDUCATION

University of Milano Bicocca 110/110 cum laude (Oct 2020 - Oct 2022)
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.

https://gabri.xyz/projects/gpr/

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