

Natural disasters modeling over a python-based WebGIS platform

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Abstract

- **Introduction**

The rapid penetration of Geoinformatics technologies into a wide range of Geosciences and Engineering Sciences has created the need to develop software tools that meet specialized processes. Particularly in the field of Geographic Information Systems (GIS), there is a high potential for development of tools for the execution of geo-processes performed both in GIS desktop environment and as geospatial web services in the Web and Cloud GIS environment.

- **Methods**

The present thesis deals with the development of an online system that aspires to support professionals and researchers in subjects related to Natural Disasters utilizing modern tools and technologies of Geoinformatics.

- **Results and significance**

In particular, open functions of Geoinformatics tools are used, which are called through a customized web interface, and they are able to calculate specialized indicators related to Natural Disasters, namely floods, landslides and fires.

- **Conclusion**

In this way, the end-user (client) is not required to have specialized software, nor have mechanisms (libraries or application programming interfaces) installed for the execution of processes except an updated web browser.

Keywords: *Web GIS, natural disasters, Python, Django*

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