

Contributing to Open Source Project as a Student through Google Summer of Code: QGIS 3D Improvement

Ismail Sunni

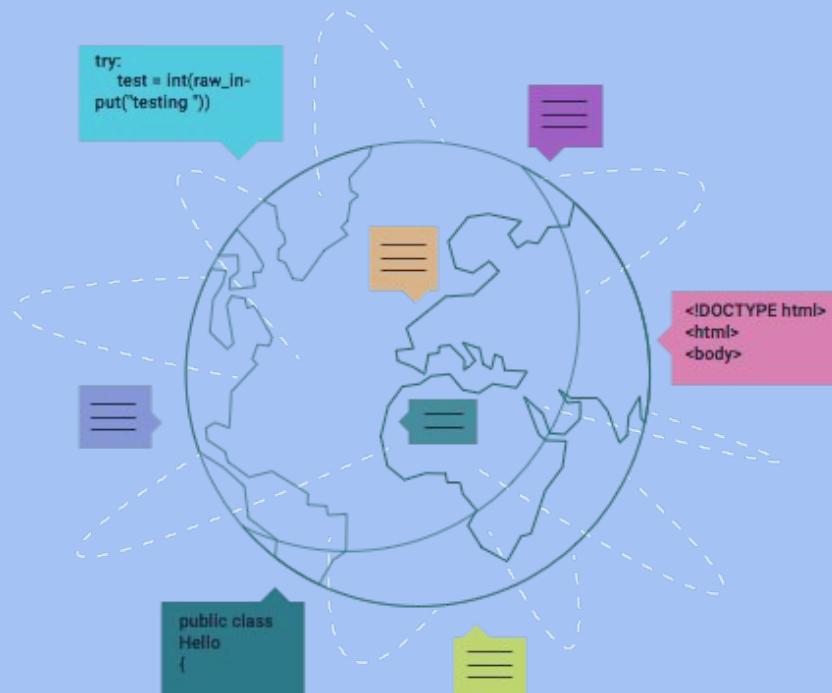
University of Muenster, Germany

ismailsunni.id



ceci n'est pas une conférence

What is Google Summer of Code (GSoC) ?





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University of Muenster, Germany

GSoC in 5 Sentences

1. Google seeks for open source **organisation** and **mentors**
2. **Students** submit a **proposal** to work on an open source project
3. 3 weeks **community bonding**
4. 12 weeks of **coding**
5. Final **evaluation** and **announcement**



Some Numbers for 2019

- **200+** open source organisation
- **30.000+** students applied (**148** countries)
- **1.276** students accepted
- **2000+** mentors



Google
Summer of Code



Google Summer of Code @



OSGeo

Overall

- Since **2007** till now
- Total: **226** projects

GSoC 2019 edition:

- 7 projects for MapMint, gvSIG, QGIS, and pgRouting
- All **successful !**

The background of the image is a dark, atmospheric forest. In the foreground, a large tree trunk is prominent on the left, its bark dark and textured. In the middle ground, a faint, glowing blue question mark is visible against the dark trees. The overall mood is mysterious and thought-provoking.

Why Joining **GSoC**?



Amazing Learning Experience

Network Building





A Door To
Open Source World

Nice Stipend :)



And A Cool T-Shirt



My GSoC Project: QGIS 3D Improvement

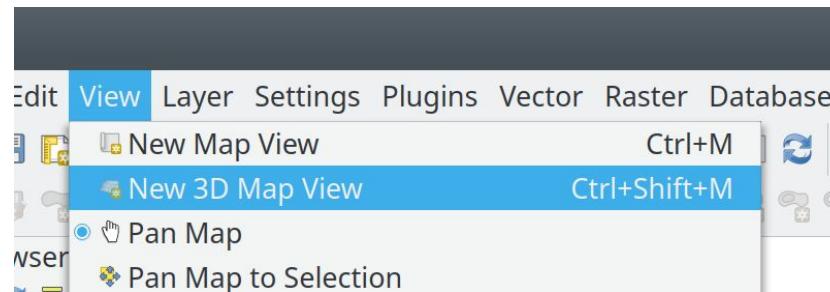
About QGIS 3D

- 2017: qgis.org accepts proposal to develop 3D views
- Feb 2018: first release within QGIS 3.0
- Mar 2018: Crowdfunding project by Lutra Consulting



Using QGIS 3D

- Open 3D map view





Browser

- WCS
- WFS
- OWS
- ArcGisMapServer
- GeoNode
- ArcGisFeatureServer
- Mergin
- GeoPackage
- Spatialite
- PostGIS

Layers

- roads
- trees
- buildings
- ap
- dtm
 - 44.7
 - 82.9
 - 121
 - 159
 - 198



3D Map 1



Layer Styling

buildings

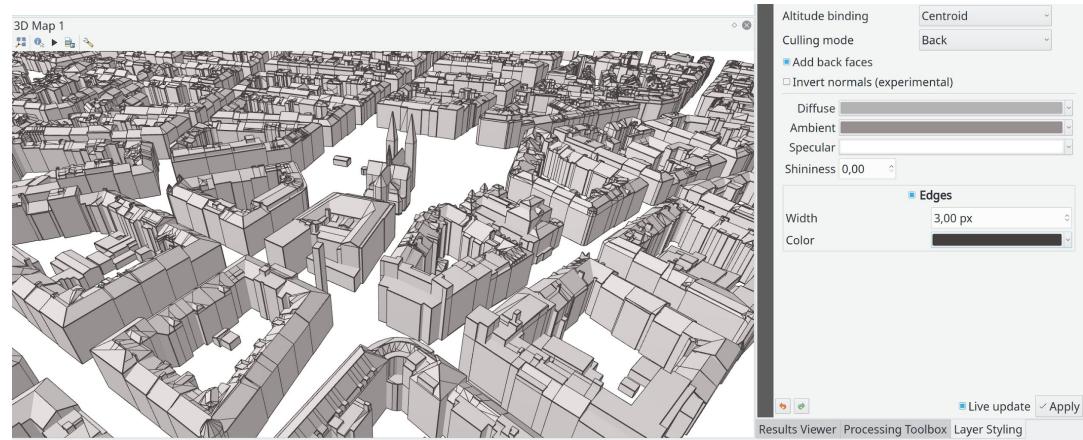
- Single symbol
- Height: 0,00
- Extrusion: 20,00
- Altitude clamping: Relative
- Altitude binding: Centroid
- Culling mode: No culling
- Add back faces
- Invert normals (experimental)

- Diffuse
- Ambient
- Specular
- Shininess: 0,00
- Edges
- Width: 2,00 px
- Color

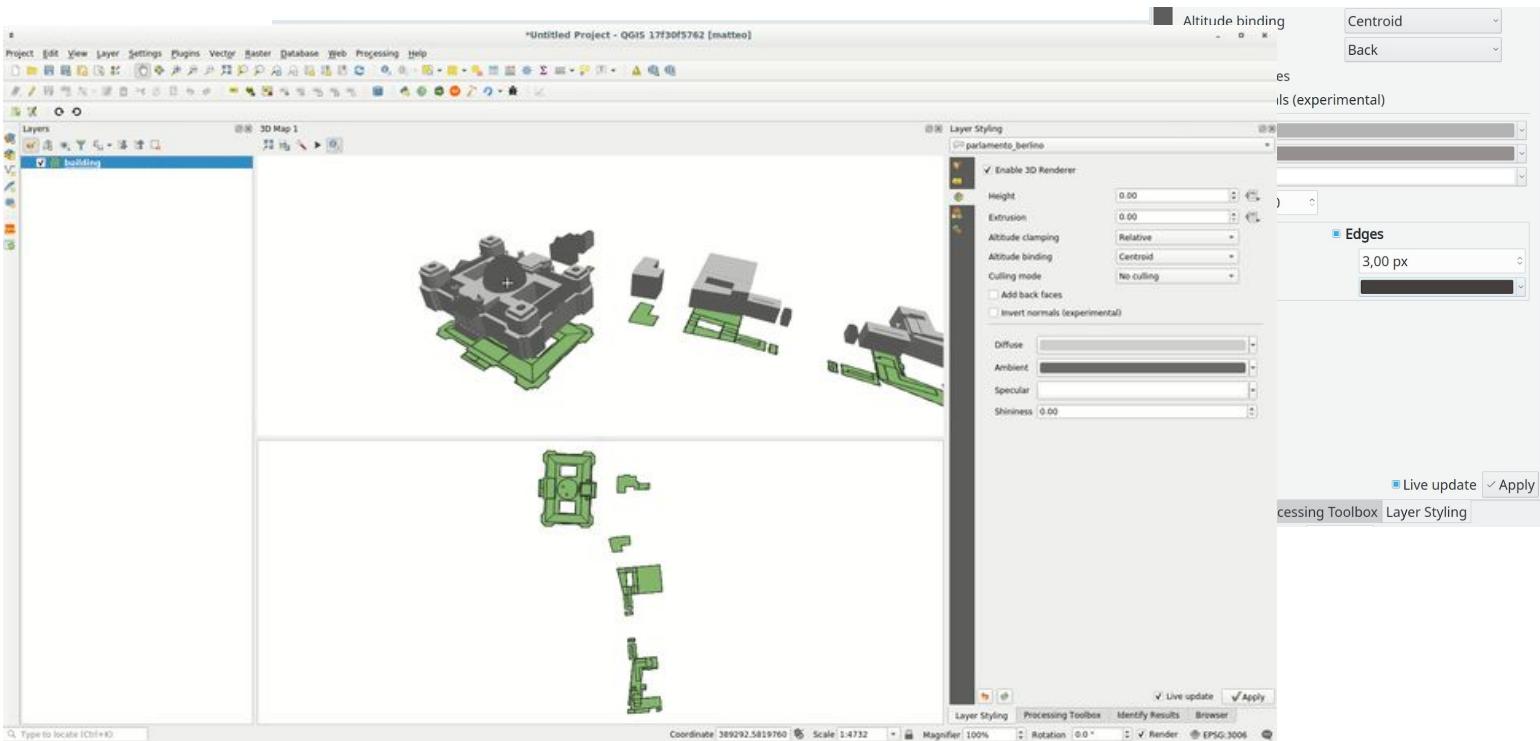
 Live update Apply

Rendering

- Terrain
- Point
- Line
- Polygon



Identification Tool



QGIS 3D Wishlist

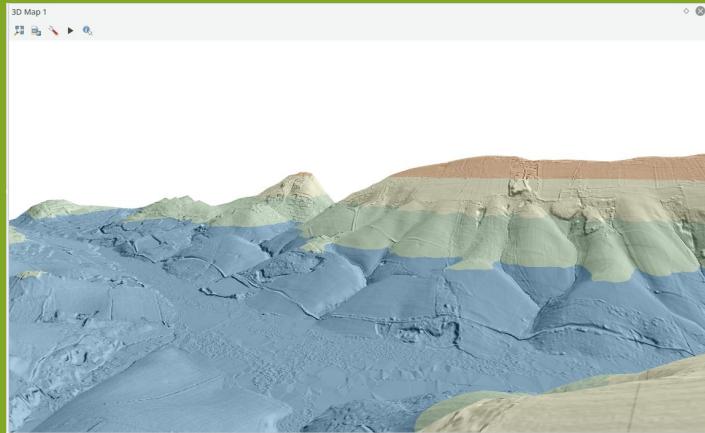
- More rendering techniques (transparency, shadows)
- More materials (textured objects)
- More styles for vector layers (lines as 3D pipes)
- More data types (point cloud, 3D rasters)
- Globe
- Formats support (3D tiles, Arc SceneLayer)
- Animation of data in scenes
- Labeling
- 3D Bookmark view
- ...



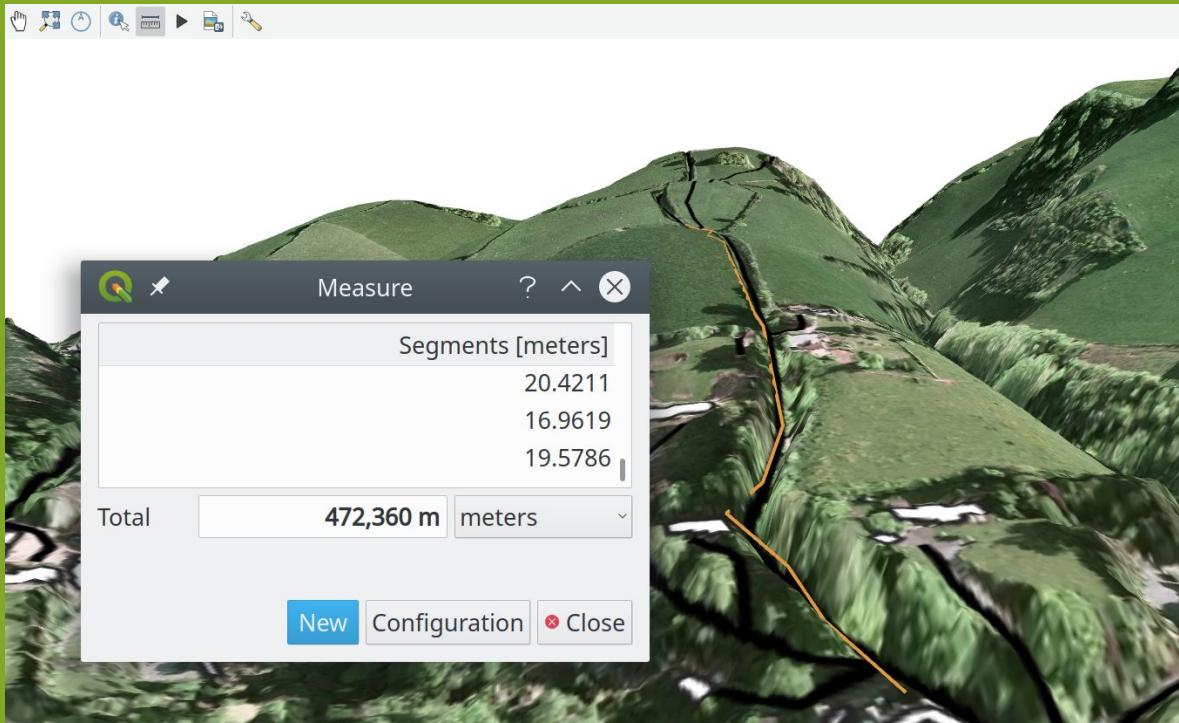
What Did I Do in the **Summer** then?



New Tool: 3D On-Screen Navigation



New Tool: 3D Measurement



3D Rendering Point as A Billboard



Layer Styling

POI

Edit Rule > Billboard symbol

Marker

SVG marker Simple marker

Unit Millimeters

Opacity 100.0 %

Color

Size 5.20000

Rotation 0.00 °

Favorites

dot black

dot white

dot blue

dot green

dot red

effect drop shadow

Save Symbol.

Live update Apply

This screenshot shows the 'Layer Styling' panel from a GIS application. It is currently set to style 'POI' features using a 'Billboard symbol'. The 'Marker' section is selected, showing options for 'SVG marker' and 'Simple marker'. The 'Unit' is set to 'Millimeters', and the 'Size' is set to 5.20000. The 'Rotation' is set to 0.00 °. Below these settings, there are preview icons for different marker types: 'dot black', 'dot white', 'dot blue', 'dot green', 'dot red', and 'effect drop shadow'. At the bottom right of the panel, there are 'Save Symbol.', 'Live update', and 'Apply' buttons. The 'Live update' checkbox is checked, and the 'Apply' button has a green checkmark.

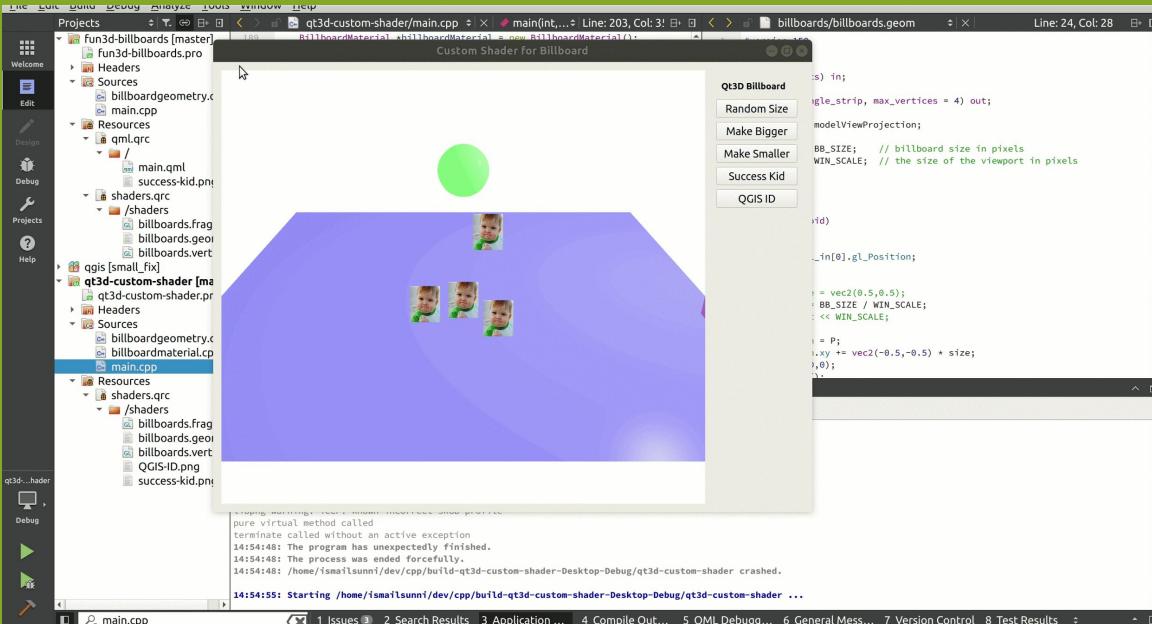
Will be Available on...

QGIS 3.10

Lesson Learned from the Summer



Iterate Faster!





QGIS Community is Awesome

A boxer in a red headgear and white gloves is facing a coach in a black shirt. The boxer has a determined expression, while the coach looks on with a smile. The background shows the ropes of a boxing ring.

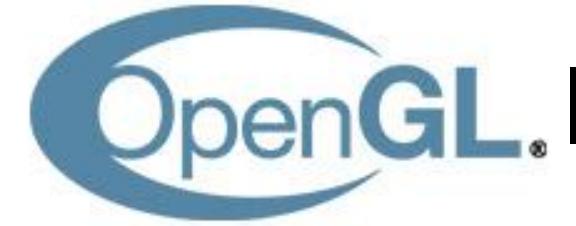
**Having Mentor
is Very Helpful**

Me

**Martin Dobias
Peter Petrik**

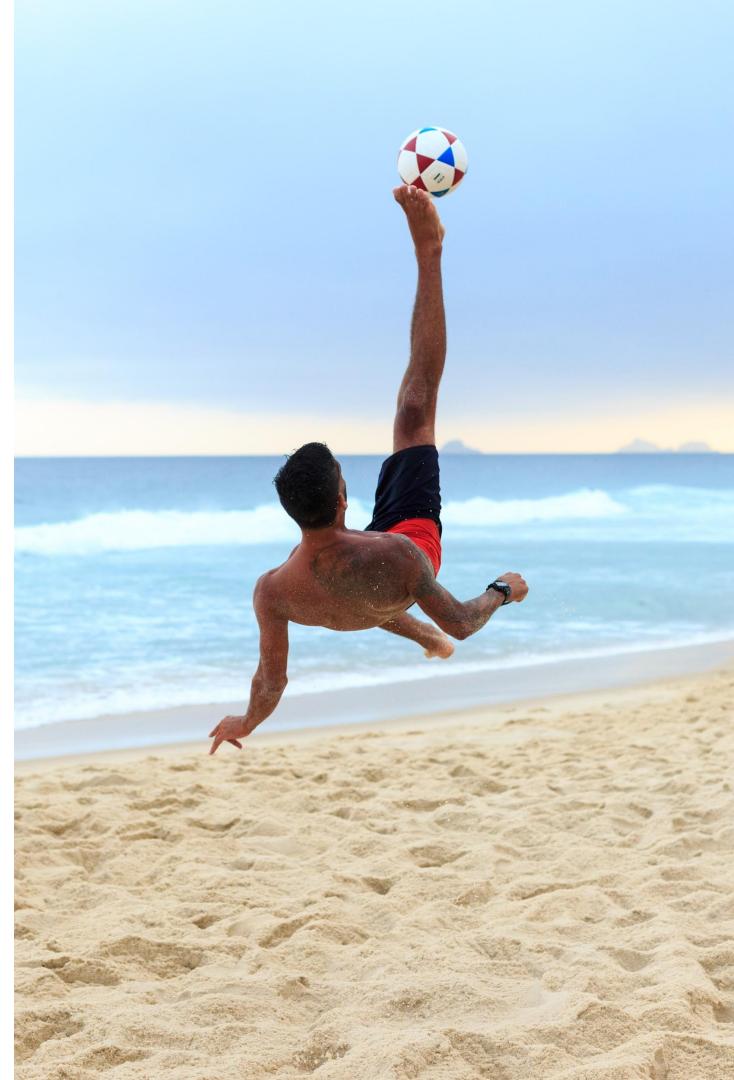


Is Hard for me



Is Harder for me

GSOC
is a Good Way
to learn a New Skill



The **Feeling** when the
my **Pull Request** is
Merged

And
it is **addictive!**



The Take Home Message

If you are a **student**,
apply for **GSoC** :)

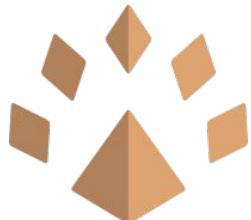


If you are **NOT**
a student,
encourage
them to **apply** or
mentor them

Google



QGIS



Martin



Peter

감사합니다
Grazie VINAKA
TERIMA KASIH
THANK YOU TAKK
merci
謝謝
ありがとう

Thank You :)

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