



Zhihao LIU

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SUMMARY

About me

I have a strong technical background and am eager to become a full-stack geospatial expert. After more than 5 years and 12 offshore seismic projects, I began my Master's degree at UiO. Currently, I am proficient in geostatistics, geospatial modeling, and GIS tools and so have worked with a wide range of datasets from field acquisition to modeling and mapping. To improve my full-stack proficiency and deliver the geodata as a service, I would dearly wish to learn back-end or front-end language depending on needs.

WORK EXPERIENCE

Research Assistant on Geomatics

UiO [12/2021 – Current]

- Proficient in **Geostatistics and Geospatial Modeling** using Python, with a toolkit including xDEM (co-registration), SciPy (optimizing, interpolation), Rasterio, Shapely, GeoPandas, Multiprocessing, PCA, and Machine learning (XGBoost regression)...
- Work with a variety of **Datasets** including those collected through field trips using LiDAR drones, remote sensing data, and open access sources such as ICESat-2, MODIS, Norway National DTM, and global DEMs (Copernicus, Arctic DEM, etc.)...
- Experienced in using/scripting **GIS tools** such as ArcGIS, QGIS, and automating GIS scripts.

Field Technician / Geomatics Professional

BGP OFFSHORE, CNPC [07/2014 – 06/2021]

- Participated in over 12 3D/4D/OBN offshore seismic surveys as a navigator and technician globally (Norway, UK, West Africa) working within a world-class seismic team with a focus on multiculturalism and QHSE.
- Four years of coding experience, optimizing workflows through data-driven solutions ([My software](#)).
- Took technical responsibilities including contract technical review, patents, and [conference publications](#).
- Registered as a Licensed Surveyor in P.R.C.
- Get promoted to Assistant Party Chief (2021.01).

EDUCATION AND TRAINING

Master in Geoscience (Geomatics)

Universitetet i Oslo [08/2021 – Current]

Address: Oslo (Norway)

Curriculum (A&B):

- **Advanced Remote Sensing and Topographic Analysis**
- IPCC AR6 Seminar
- Floods, Avalanches and Landslides
- **Surveying, Photogrammetry and Spatial Analysis**
- **Geophysical Data Science**
- Glacial and Periglacial Geomorphology

Thesis: [Benchmarking DEM Precision: Workflows and Applications on Snow Depth.](#)

Bachelor in Geodesy and Geomatics
South West Petroleum University [08/2010 – 07/2014]

Address: Chengdu (China)

- With a background in Engineering, Cartography, GNSS and GIS.
- A for bachelor's thesis (A WebGIS system for urban infrastructure management).

PROJECTS

North Sea Quad 35 Hybrid 3D seismic survey

[07/2020 – 10/2020]

[Quad 35 is the first hybrid seismic combined streamers and nodes](#) for commercial purposes. I worked as a technician for contract technical review, onboard acquisition, data QC & reprocessing, and follow-up work. I was the person who dug deepest into the data quality of Q35. And I got [the best commendation](#) from the client for modeling this novel acquisition to make it more efficient and understandable.

Essaouira side-scan sonar survey, Offshore Morocco

[04/2017 – 04/2017]

I was in charge of and conducted a side-scan sonar pre-survey for seismic projects. The main point was identifying the possible shallow hazards for the seismic streamers: reefs, shipwrecks, and pipelines. I am also familiar with offshore magnetic and gravity surveys that we do simultaneously during seismic acquisition.

SNOWDEPTH – Global snow depths from spaceborne remote sensing for permafrost, high-elevation precipitation, and climate reanalysis

[01/2022 – Current]

As a research assistant, I joined the field (drone) trip ([the news](#)) and worked on the ICESat-2 dataset and a variety of DEM products; thus far, I am able to generate snow depth measurements for the entire of Norway. Later, I am trying to interpolate and feed the data into the climate/hydrological models and contribute my codes to the open-source GIS community.

DIGITAL SKILLS

Automating GIS / Data-driving Solution / Data QC & Processing / Numerical Modeling / Python

LANGUAGE SKILLS

Mother tongue(s): **Chinese**

Other language(s): **English (Professional working proficiency)** | **Norwegian (beginner)**

HOBBIES AND INTERESTS

Marathon

- Not bad runner with 130 (half-marathon) and 330 (marathon) of the personal best.
- Have organized medium size marathon (15K) and was in charge of supply and volunteers.

OSI Friluft

- Board member and tour leader of OSI Friluft.

REFERENCES

2016 - 2021:

Chief geophysicist of BGP Prospector, [Bo Wen](#), Email: wenbo01@cnpc.com.cn, Mobile: +86 18622259275

2021 - Present

Project Leader and Co-supervisor, [Désirée Treichler](#), Email: desiree.treichler@geo.uio.no, Mobile: +47 22857869

Professor and Supervisor, [Andreas Max Käab](#), Email: a.m.kaab@geo.uio.no, Mobile: +47 22855812