

# ALI (HOMAYOUN) REZAI

Phone number: (403)400-7461

Email : [ali.rezaiefarhadabad@ucalgary.ca](mailto:ali.rezaiefarhadabad@ucalgary.ca)

[Google Scholar](#)

[GitHub](#)

[ResearchGate](#)

[LinkedIn](#)

My interests revolve around the Python Programming for Remote Sensing and, more recently, Machine/Deep Learning Machine learning to solve the global and environmental problems.

## EDUCATION

- 2021 – 2025 University of Calgary, Canada | PhD student in Remote Sensing
- 2014 – 2017 Kharazmi University, Tehran, Iran | Master of GIS & Remote Sensing
- 2010 – 2014 Tabriz University, Iran | Bachelor of Science in Landscape Engineering

## WORK EXPERIENCE

- 2020 – 2021: Geospatial Engineer at Havabord Co. Esfahan, Iran.
- 2018 – 2020: Consultancy at Land Information System using Remote Sensing for Alborz Agricultural and Natural Resources Organization.  
responsible for spatiotemporal (ST) land use/land cover change (LUCC) research
- 2017 – Present: Independent researcher in using GIS and remote sensing.

## APPLICATIONS AND TOOLS

- DevOps tools: Docker, Git, GitHub, command line and Linux.
- GIS/ RS Software: OSGeoLive, QGIS, GRASS GIS, ArcGIS and ENVI.
- Databases: PostgreSQL, PostGIS, MongoDB and Redis.
- Web Mapping: Earth Engine, Django, GeoServer and GeoNode.
- Data Analysis: Python, Jupyter Notebook, Earth Engine, Keras, Scikit-Learn.
- Big data framework: Google Earth Engine Python and JS API.
- Software Development: Qt, PyQt5 and Qt Designer.

## TECHNOLOGY SKILLS

Exceptional coding skills in Google Earth Engine for Big data analytics in the cloud.  
Machine Learning and algorithms for Remote Sensing Data processing (Optical, SAR, LiDAR).  
Experienced in python to analyse spatial data (Arcpy, PyShp, Fiona, Shapely, GDAL, Rasterio).  
Familiar with GeoNode web-based platform, GeoServer and ArcGIS JavaScript API.  
Understands web architecture and tech to include knowledge of HTML, CSS, and JavaScript.  
Machine/Deep Learning Expert Architecture, Concepts and Solutions in prototypes.  
Experienced in Linux environment and familiar with shell scripting.

## PUBLICATIONS

Ghaffarian, S.; **Rezaie Farhadabad**, A.; Kerle, N. Post-Disaster Recovery Monitoring with Google Earth Engine. *Applied Sciences*. 2020, 10, 4574. [\[CrossRef\]](#)

Zare, H., **Rezaie Farhadabad**, A., Bakhtyari, HRR., & Arvin, M., (2020), *Effect of Dam Construction to Land Use and Land Cover Changes using Satellite Imagery, case study: Kousar dam, Kohgiluyeh and Boyer Ahmad province, Iran*, *Journal of Application of Geographic Information Systems and Remote Sensing in Planning*, 17(11), 60-69.

**Rezaie Farhadabad**, A., & Mojarad, K., (2019), *Sustainable Agriculture Development in South Khorasan Province (Iran) Using Comparative Advantage theory in the GIS*. *Journal of Application of Geographic Information Systems and Remote Sensing in Planning*, 11(9), 35-49.

Moharami, M., Khani, H., & **Rezaie Farhadabad**, A., (2019), *Positioning for the purpose of Urban Expansion using Fuzzy Logic analysis in GIS and AHP method*. *Journal of Application of Geographic Information Systems and Remote Sensing in Planning*, 15(7), 53-67.

**Rezaie Farhadabad**, A., Shabanpor, N., Jadidi, M., & Khani, H., (2018), *Smart waste collection system based on the Internet of Things and GIS*. The 25th National Conference on Geomatics, Iranian National Cartographic Centre, Tehran.

**Rezaie Farhadabad**, A., Sadidi, J., & Mohamadi, Z., (2017). *Analysis of time complexity and performance MapAlgebra in Arcpy and Rasterio*. Third National Conference on New Approaches in the computer in Electrical Engineering in date 2017-05-05 in Rudsar, Iran.

**Rezaie Farhadabad**, A., Gholami, A., & Sadidi, J., (2017), *3D Web-Based visualization and management of huge city models using open source tools*. The 24th National Conference on Geomatics, Iranian National Cartographic Centre, Tehran.

**Rezaie Farhadabad**, A., Khani, H., & Ziaeyan, P., (2017), *Reconstruction 3D Building model using LiDAR data and UltraCam airborne image*. The 24th National Conference on Geomatics, Iranian National Cartographic Centre, Thran.

Zare, H., **Rezaie Farhadabad**, A., Khani, H., & Arvin, M., (2016). *Land surface temperature estimation from Remote Sensing data*. The 2nd international congress on earth science and urban development at Tabriz.

Torahi, A., Khani, H., & **Rezaie Farhadabad**, A. (2016). *Evaluating the SVM and SAM algorithms capabilities in hyperspectral Images classification*. The 23rd National Conference on Geomatics, Iranian National Cartographic Centre, Tehran.

## PROJECTS

- Sentinel 1-2 Image Processing and Analysis Based on Machine Learning Methods and Techniques: A Review paper
- **geegui**: A cloud-based GIS software based on google earth engine and pyqt5