Curriculum Vitae

Lam Van Nguyen

BSc, MSc: Surveying and Mapping Engineering

LinkedIn https://www.linkedin.com/in/lam-nguyen-3b76611a8/

Google Scholar https://scholar.google.com/citations?user=gM2LmvwAAAAJ&hl=en

ResearchGate https://www.researchgate.net/profile/Lam-Nguyen-8?ev=prf_overview

1. Personal Information

Date of birth	November 05, 1988
E-mail address	vanlnNTNU@gmail.com
Telephone number	(+47) 46742064
Address	Hatlasvingen 9, Ålesund, Norway
Nationality	Vietnamese

2. Personal Skills

- ArcGIS Desktop
- ArcGIS Pro
- ESRI ArcMap
- ESRI ArcView
- HEC-RAS, QGIS
- Arcpy, PyDeck, GeoPandas, H3
- Autodesk AutoCAD
- Autodesk InfraWorks
- Microsoft Office Suite
- Mike Urban
- SWMM, EPANET
- Machine Learning
- Python, R, JavaScript
- Android Studio
- Unity3D, SketchUp
- Visual Basic, Visual C#

3. Educational Background

❖ **Norwegian University of Science and Technology (NTNU), Norway** *01.2020 – 04.2023*

- **Degree:** PhD Engineering
- **PhD Domain:** Machine Learning for Water Collection System Assessment

❖ **Hanoi University of Mining and Geology, Vietnam** *11.2013 – 06.2015*

- **Degree:** Master of Engineering in Surveying and Mapping
- **GPA:** 8.19/10.0

❖ **Hanoi University of Mining and Geology, Vietnam** *11.2006 – 11.2011*

- **Degree:** Bachelor of Engineering in Surveying and Mapping
- **GPA:** 8.18/10.0

4. Employment History

❖ **InfoTiles, Norway** *04.2023 – 06.2024*

- **Position:** *Senior Data Scientist*
- **Role Description:**
  - ✓ Develop Machine Learning models to predict and estimate status of biofilters
  - ✓ Process water-based network data for network analysis
  - ✓ Develop algorithms for data anonymization of water meters for DMA zones
  - ✓ Maintain service for sending alerting emails
  - ✓ Develop Machine Learning models and analytic algorithms for time series analysis
  - ✓ Apply Machine Learning models for leakage detection and localization in water distribution network
  - ✓ Efficiently apply spatial analysis packages such as GeoPandas, Arcpy, network, H3, and Shapely to process, organize, and advance the analysis of geospatial data

❖ **Norwegian University of Science and Technology (NTNU), Norway** *12.2019 – 04.2023*

- **Position:** *PhD Candidate*
  Smart Water and Environmental Engineering Group, Department of Ocean Operations and Civil Engineering, Faculty of Engineering, NTNU
- **Role Description:**
  - ✓ Mainly focus on developing a wastewater/stormwater pipeline network monitoring and predicting platforms in a city in Norway using machine learning technology and GIS
  - ✓ Participate in supporting my supervisor to teach other students how to use GIS-based software (ArcGIS Desktop, ArcGIS Pro, QGIS) to prepare and pre-process GIS data before importing and running hydrological models
  - ✓ Develop Augmented Reality application on mobile phone for 3D visualization
  - ✓ Conduct Python codes for ArcGIS Desktop and ArcGIS Pro using the "Arcpy" package to process GIS data and "PyDeck" to make interactive maps from geospatial data
  - ✓ Support teaching a module on Modelling and Simulation of Pipe Networks and Stormwater Management

❖ **Hanoi University of Mining and Geology (HUMG), Vietnam** *11.2012 - 12.2019*

- **Position:** *Lecturer*
  Department of Geodesy, Faculty of Geomatics and Land Administration, HUMG
- **Role Description:**
  - ✓ Teach the students to use the Total Stations and GPS devices to establish maps
  - ✓ Deeply work with Geo-informatics software (such as ArcGIS Desktop, ArcGIS Pro, QGIS, Trimble Total Control, Topcon Tool, Trimble Business Center, GNSS Solution, eCognition, and Envi) or 3D models (e.g., InfraWorks, AutoCAD, and Sketchup)

❖ **Mining Geology design survey consulting joint stock company, Vietnam** *06.2011 - 11.2012*

- **Position:** *Survey Engineer*
- **Role Description:**

✓ Mainly focus on building cadastral maps applying the Total Stations (Topcon, Sokkia, Nikon, and Leica)

✓ Train workers for the company to use these machines and process data for cadastral mapping.

5. Certifications

1.
   - **Name:** Congress Presentation Certificate
   - **Issuing organization:** International Water Association
   - **Issue date:** 09.2022
2.
   - **Name:** Working with ArcGIS Desktop: ArcGIS Pro
   - **Issuing organization:** ESRI Vietnam
   - **Issue date:** 08.2019
3.
   - **Name:** Configuration Apps and Sharing Contents with ArcGIS Platform
   - **Issuing organization:** ESRI Vietnam
   - **Issue date:** 08.2019

6. Teaching Tutorials

1. **Lam Van Nguyen** and Seidu Razak (2022). *Modeling and Simulation of Urban Stormwater Collection Systems using Integration of SWMM, GIS, and Python*. Water and Environmental Engineering Group. Department of Ocean Operations and Civil Engineering. Norwegian University of Science and Technology.
2. **Lam Van Nguyen** and Seidu Razak (2022). *Application of MIKE URBAN and GIS for Sewer Collection Systems Modeling and Simulation*. Water and Environmental Engineering Group. Department of Ocean Operations and Civil Engineering. Norwegian University of Science and Technology.
3. **Lam Van Nguyen** and Seidu Razak (2022). *Integration of GIS and Python for Sewer Condition Assessment*. Water and Environmental Engineering Group. Department of Ocean Operations and Civil Engineering. Norwegian University of Science and Technology.

7. Publications

1. **Lam Van Nguyen**, Dieu Tien Bui, and Razak Seidu (2023). Utilization of Augmented Reality Technique for Sewer Condition Visualization. Water. (Impact Factor: 3.4, Cite Score: 5.5). https://doi.org/10.3390/w15244232
2. Nguyen Van Sang, Khuong Van Long, Tran Tuan Dung, **Lam Van Nguyen**, Bui Cong Que, Do Van Mong, Bui Dang Quang, Ole Baltazar Andersen, Rene Forsberg, Dieu Tien Bui (2023). Seafloor depth mapping of central Vietnam's sea area and its surrounding using gravity anomaly data and gravity geological method. ***Advances in Space Research***. (Impact Factor: 2.6, Cite Score: 5.0). https://doi.org/10.1016/j.asr.2023.04.033
3. **Lam Van Nguyen** and Razak Seidu (2023). Predicting Sewer Structural Condition using Hybrid Machine Learning Algorithms. Urban Water Journal. (Impact Factor: 2.675, Cite Score: 3.9). https://doi.org/10.1080/1573062X.2023.2217430
4. **Lam Van Nguyen** and Razak Seidu (2022). Application of Regression-Based Machine Learning Algorithms in Sewer Condition Assessment for Ålesund City, Norway. Water. (Impact

Factor: 3.530, Cite Score: 4.8). https://www.mdpi.com/2073-4441/14/24/3993

5. **Lam Van Nguyen**, Dieu Tien Bui, and Razak Seidu (2022). Comparison of Machine Learning Techniques for Condition Assessment of Sewer Network. IEEE Access. https://doi.org/10.1109/ACCESS.2022.3222823
6. **Lam Van Nguyen**, Hoese Michel Tornyeviadzi, Dieu Tien Bui, and Razak Seidu (2022). Predicting Discharges in Sewer Pipes Using an Integrated Long Short-Term Memory and Entropy A-TOPSIS Modeling Framework. Water. (Impact Factor: 3.103, Cite Score: 3.7). https://www.mdpi.com/2073-4441/14/3/300
7. **Lam Van Nguyen**, Dieu Tien Bui, and Razak Seidu (2023). A Comparative Flood Susceptibility Assessment in a Norwegian Coastal City Using Feature Selection Methods and Machine Learning Algorithms. Proceedings of the International Conference on Geo-Spatial Technologies and Earth Resources - GTER 2022 - Volume 1. https://link.springer.com/chapter/10.1007/978-3-031-17808-5_36
8. **Lam Van Nguyen**, Dieu Tien Bui, and Razak Seidu (2021). Identification of Sensitive Factors for Placement of Flood Monitoring Sensors in Wastewater/Stormwater Network Using GIS-Based Fuzzy Analytical Hierarchy Process: A Case of Study in Ålesund, Norway. Proceedings of the International Conference on Innovations for Sustainable and Responsible Mining - ISRM 2020 - Volume 2. https://link.springer.com/chapter/10.1007/978-3-030-60269-7_5
9. Van Sang Nguyen, Van-Tuyen Pham, **Lam Van Nguyen**, Ole Baltazar Andersen, Rene Forsberg, Dieu Tien Bui (2020). Marine Gravity Anomaly Mapping for the Gulf of Tonkin area (Vietnam) using Cryosat-2 and Saral/AltiKa satellite altimetry data. ***Advances in Space Research***. (Impact Factor: 1.746). https://www.sciencedirect.com/science/article/pii/S0273117720303033
10. Luyen Khac Bui, **Lam Van Nguyen**, Trang Thu Thi Tran, 2018. Crossover Adjustment Applied in Marine Gravity Data Processing: an example of a Dataset Surrounding Bach Long Vi Island, Vietnam. *Journal of Mining and Earth Sciences*, 59 (6), 43-49, Hanoi, Vietnam.
11. Sang Van Nguyen, Huong Thu Thi Kim, **Lam Van Nguyen**, 2015. An application of the cross-over adjustment technique for processing of altimetry data in the East Sea. *The second International Conference on Scientific Research Cooperation between Vietnam and Poland in Earth sciences*, Hanoi, Vietnam.
12. **Lam Van Nguyen**, 2014. Determine coordinate and difference of gravity anomaly at crossover points on gravity lines by ship. *Proceedings of the 21st Mining and Geology Scientific - Technological Conference*. University of Mining and Geology, Hanoi, Vietnam.
13. Sang Van Nguyen, **Lam Van Nguyen**, 2014. Study for method of assess accuracy marine gravity anomaly direct surveying by ship in the Vietnam East Sea. *Proceedings of the 4th Scientific Conference on Military Topography, the Bureau of Cartography - General Staff*, Hanoi, Vietnam.
14. Sang Van Nguyen, **Lam Van Nguyen**, 2014. Using satellite altimetry data to determine natural mean dynamic surface in the East Sea. *Proceedings of the Scientific - Technology Conference: Geodesy and Cartography for International Integration*, special issue for 20 years of Vietnam Institute of Geodesy and Cartography, Hanoi, Vietnam.
15. Phong Van Duong, **Lam Van Nguyen**, 2012. Analyzing some methods transforming from plane-coordinate to other plane-coordinate. *Journal of Geodesy and Cartography*, Vietnam Institute of Geodesy and Cartography, Hanoi, Vietnam.
16. **Lam Van Nguyen**, Phuong Duc Dao, 2011. Studying some methods for transform from Geocentric Cartesian coordinate to Geodetic coordinate. *The Scientific Conference for Student of Mining and Geology*, Hanoi, Vietnam.

8. References

Razak Seidu (PhD)

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Dieu Tien Bui (PhD)

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Ålesund, Norway, August 14, 2024

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