



# Tadele Melese Lebez a

Date of birth: 29/01/1989

Nationality: Ethiopian

## CONTACT

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## WORK EXPERIENCE

07/04/2023 – CURRENT Tokyo, Japan

### Graduate Researcher Soka University

- Researching water hyacinth detection using **deep learning** and drone images
- Developed models for **image classification** and environmental monitoring.
- Processed geospatial data using **Google Earth Engine**.
- Gained skills in **deep learning, machine learning, MLOps**, and **web development**

#### Achievements:

- Improved detection accuracy by 92% in the **SATREPS EARTH project**.
- Introduced scalable **MLOps** practices for efficient model deployment

28/10/2019 – 07/04/2023 Bahir Dar, Ethiopia

### University Lecturer Bahir Dar University, Ethiopia

- Delivered **GIS** and **remote sensing** lectures and training.
- Conducted research on **water resources** and climate change.
- Provided **community services** using GIS solutions for local development.

#### Achievements:

- Mentored many students in GIS and remote sensing.
- Published peer-reviewed research, enhancing the university's profile.

14/10/2018 – 28/10/2019 Dilla, Ethiopia

### University instructor Dilla University, Ethiopia

- Delivered training in **GIS** and **remote sensing**.
- Conducted research on **environmental management**.
- Provided **community services** for GIS-based solutions.

#### Achievements:

- Contributed to local development projects through applied GIS research.
- Supported students' skills in GIS and remote sensing.

27/03/2010 – 18/04/2018 Yeduha, Ethiopia

### Highschool Teacher Regional Education Sector

- Taught **geography** to secondary and preparatory school students.
- Participated in various **co-curricular activities** supporting student development.
- Conducted **action research** to improve teaching methods and student outcomes.

#### Achievements:

- Enhanced student engagement through interactive geography lessons.
- Contributed to the school's academic and extracurricular programs.

## EDUCATION AND TRAINING

### Responsive Website Development freecodecamp

Website <https://www.freecodecamp.org/certification/Tadele/responsive-web-design>

### End-to-End Google Earth Engine Development Spatial Thoughts

Website <https://spatialthoughts.com/verify/>

### Spatial Data Management

## LANGUAGE SKILLS

MOTHER TONGUE(S): Amharic

## Other language(s):

English

Listening B2

Spoken production B2

Reading B2

Spoken interaction B2

Writing B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

## DIGITAL SKILLS

Microsoft Office | Social Media | Microsoft Excel | Microsoft Word | Microsoft Powerpoint

## COMMUNICATION AND INTERPERSONAL SKILLS

### Digital Skills

#### Programming Languages:

- **Python:** Experienced in machine learning, data analysis, and web development.
- **R:** Used for statistical analysis and data visualization.
- **JavaScript:** Applied in web development for building dynamic and interactive applications.
- **HTML/CSS:** Expertise in creating responsive websites.
- **SQL:** Skilled in database management and querying.

#### Software and Tools:

- **Google Earth Engine (GEE):** Proficient in geospatial data analysis and remote sensing.
- **TensorFlow/PyTorch:** Experienced in deep learning model development and training.
- **ArcGIS/QGIS:** Expertise in spatial data management and analysis.
- **Visual Studio Code (VSCode):** Frequently used for coding and project management.
- **Jupyter Notebooks:** Used for data analysis, machine learning, and scientific research.
- **Streamlit:** Building interactive web applications for machine learning models.

#### Technologies:

- **MLOps:** Knowledge in model deployment, monitoring, and scaling machine learning models.
- **Cloud Computing:** Experience with cloud platforms like **Google Cloud** for data storage and processing.
- **Drone Imagery Processing:** Applied in research for detecting environmental changes using deep learning.
- **Semantic Segmentation:** Used in **computer vision** for image classification and environmental monitoring.

## PUBLICATIONS

2022

### [Groundwater potential zone mapping using analytical hierarchy process and GIS in Muga Watershed, Abay Basin, Ethiopia](#)

Melese, T., & Belay, T. (2022). Global Challenges, 6(1), 210006

2022

### [Impacts of land use and land cover change on ecosystem service values in the Afroalpine area of Guna Mountain, Northwest Ethiopia](#)

Belay, T., Melese, T., & Senamaw, A. (2022). Heliyon, 8(12).

2021

### [The Spatiotemporal Dynamics of Land Use Land Cover Change, and Its Impact on Soil Erosion in Tagaw Watershed, Blue Nile Basin, Ethiopia](#)

Melese, T., Senamaw, A., Belay, T., & Bayable, G. (2021) Global Challenges, 5(7), 2000109.

2023

### [Trends in rainfall and temperature extremes in Ethiopia: Station and agro-ecological zone levels of analysis](#)

Wubaye, G. B. et al. (2023) Atmosphere, 14(3), 483.

2022

**Application of analytical hierarchal process, frequency ratio, and Shannon entropy approaches for landslide susceptibility mapping using geospatial technology: The case of Dejen district, Ethiopia.**

Melese, T., Belay, T., & Andemo, A. (2022). Arabian Journal of Geosciences, 15(5), 424.

2023

**Trend analysis of hydro-climate variables in the Jemma sub-basin of Upper Blue Nile (Abbay) Basin, Ethiopia.**

Lebeza, T. M., Gashaw, T., Tefera, G. W., & Mohammed, J. A. (2023). SN Applied Sciences, 5(5), 129.

2024

**Smallholder farmers' vulnerability to climate change and variability: Evidence from three agroecologies in the Upper Blue Nile, Ethiopia.**

Berhanu, A. A., Aye, Z. B., D, D. C., Melese, T., Fenta, A. B., & K, K. E. (2024). Heliyon, 10(7).

2024

**Performance of specific CMIP6 GCMs for simulating the historical rainfall and temperature climatology of Lake Tana sub-basin, Ethiopia.**

Lebeza, T. M., et al (2024). Scientific African, e02387.

2024

**Comparative analysis of RUSLE and SWPT for sub-watershed conservation prioritization in the Ayu watershed, Abay basin, Ethiopia.**

Terefe, B., Melese, T., Temesgen, F., Anagaw, A., Afework, A., & M, G. (2024). Heliyon, 10(15).

2023

**Application of geospatial technology for potential ecotourism site selection in Masha district, Southwest Ethiopia.**

Andemo, A., Getahun, K., Melese, A., & Melese, T. (2024). 21(5), 5019-5034.

## RESEARCH AND SOCIAL MEDIAS

**Links to my professional profiles, research portfolio, and code repositories:**

- **Portfolio:** <https://tadele-melese.github.io/tadele-website/>
- **LinkedIn:** <https://www.linkedin.com/in/tadele-melese-7a45961ba/>
- **GoogleScholar:** <https://scholar.google.com/citations?user=EXMML4sAAAAJ&hl=en>
- **ResearchGate:** <https://www.researchgate.net/profile/Tadele-Melese>
- **ORCID:** <https://orcid.org/0000-0002-4627-8193>
- **GitHub:** <https://github.com/tadele-melese>

## REFERENCES

**Dr. Yihun Dile (Ph.D.) - West Palm Beach, Florida, United States Data science | Physical Science, Researcher, yihundile@gmail.com +1 (979) 985-1957**

**Gashaw Temesgen (PhD.) - Bahir Dar University Geospatial Data Analysit, Environmentalist, Climatologist gtemesgen114@gmail.com +251 94 607 8876**

**Professor Imamura Hiroki - Faculty of Engineering Department of Information Systems Science, Soka university, Tokyo, Japan, imamura@soka.ac.jp**

**Dr. Bismark Asante, Professor Imamura Hiroki - Faculty of Engineering Department of Information Systems Science, Soka university, Tokyo, Japan, bismark@soka.ac.jp**