# Minyechil Alehegn Tefera

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## Education

**National Taipei University of Technology, Taiwan**
PhD in Electrical Engineering and Computer Science
CGPA 4.00/4.00(1st rank)
**Honors** : Winners 18th Taiwan Management Association Thesis Paper Awards.

**Symbiosis International University, India**
M.Tech in Computer Science and Engineering
Sep.2016-june 2018
CGPA 7.72/10.00

**Wollega University, Ethiopia**
BSc in Information Technology
CGPA3.81/4.00(1st rank)
June 2014
Honors: Recognition of excellent performance from Wollega University

## EXPERIENCE

**Mizan Tepi university**

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|---|---|
| Assistant lecturer | 2014-2016 |
| Lecturer | Oct .2018-2022 |
| Assistant professor (with MSc) | Jan 2022 |
| Chair of Information Technology Department | Oct. 2018-Sep 2020 |
| Associate registrar | Oct. 2020-jun 2022 |

**National Taipei university of technology**

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|---|---|
| Postdoctoral researcher, September 2025-present | |
| Teaching Assistant : Fiber optic sensors course | Spring 2023 |
| Teaching Assistant : AI for Optoelectronics Applications | Fall 2025 |

## Academic Achievements

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| 1.  IEEE Internet of Things | reviewer |
| 2.  Springare Nature, the journal of supercomputing | reviewer |
| 3.  IEEE 5th International Conference on ICT for Development for Africa Bahirdar, Ethiopia. | reviewer |
| 4.  HIV & AIDS Review | reviewer |
| 5.  Indian Journal of Science and Technology | reviewer |
| 6.  NeurIPS2023 Workshop, New Orleans, United States | reviewer |
| 7.  18th Women in Machine Learning Workshop (WiML2023), co-located with the NeurIPS conference in New Orleans, USA | reviewer |
| 8.  NeurIPS 2022 Workshop, AFCP 2022, New Orleans, USA | reviewer |
| 9.  NeurIPS20221 virtual Workshop, AFCR 2021 | reviewer |

## Trainings and Awards

1. Artificial Intelligence Data Fairness and Bias, Deeplearnig.ai, coursera     2020
2. Using Python for Research, edx,Harvarduniversity,USA     2020
3. Neural Networks and Deep Learning,Deeplearnig.ai,coursera     2020
4. Improving Deep Neural Networks: Hyper parameter tuning, Regularization and Optimization, Deeplearnig.ai,coursera     2020
5. Structuring Machine Learning Projects, Deeplearnig.ai, coursera     2020
6. Convolutional Neural Networks, Deeplearnig.ai,coursera     2020
7. Certificate of the recognition of excellent performance from all graduates of Information Technology department in 2013/14     2014
8. Certificate of Participation in the International Workshop of the Risk Award 2015 Project in 2017 organized by Munich Re Foundation, Germany&     2017 International Center of EQUI-T of ALL India Institute of local self-government.

## Research interest

Optical fiber sensors, robotics, optical communications, Artificial Intelligence, meta learning/transfer learning, machine learning, Generative AI, Internet of Things (IoT), digital twin.

## Publications

### Selected journal papers

1. **M. A. Tefera** et al.” Optimizing Free-Space Optical Communication Based Distributed Temperature Sensing Demodulation Using Meta-Learning” IEEE Journal of Lightwave Technology ,2025.
2. **M. A. Tefera** et al., "Enhanced Fiber Bragg Grating Interrogation Using Deep Learning and Fabry–Pérot Liquid Crystal: A CGAN-CNN for Improved Wavelength Detection, "IEEE Sensors Journal,2025.
3. **Tefera, M.A**.; Dehnaw, A.M.; Manie, Y.C.; Yao, C.-K.; Bogale, S.D.; Peng, P.-C. Advanced Denoising and Meta-Learning Techniques for Enhancing Smart Health Monitoring Using Wearable Sensors. *Future Internet* , *16*, 280, 2024**.**
4. **M. A. Tefera**, Y. C. Manie, C. -K. Yao, T. -P. Fan and P. -C. Peng, "Meta-Learning for Boosting the Sensing Quality and Utility of FSO-Based Multi-Channel FBG Sensor System," IEEE *Sensors Journal,*2023.
5. **M. Alehegn**, “Application of machine learning and deep learning for the prediction of HIV/AIDS,” HIV & AIDS Review, 2022.
6. M. Araya and **M. Alehegn**, “Text to Speech Synthesizer for Tigrigna Linguistic using Concatenative Based approach with LSTM model,” Indian Journal of Science and Technology, 2022.

7. P. A. Shelar, P. N. Mahalle, G. R. Shinde, H. R. Bhapkar, and **M. A. Tefera**, "Performance-Aware Green Algorithm for Clustering of Underwater Wireless Sensor Network Based on Optical Signal-to-Noise Ratio," Mathematical Problems in Engineering, 2022.
8. C. Lin, H. Liang, T. Su, and **M. A. Tefera**, "Multi-Criteria Decision-Making Approach for Analyzing Competency Model of Technology Managers," Mathematical Problems in Engineering, 2022.
9. **M. Alehegn** and R. R. Joshi, "Type II Diabetes Prediction Using Combo of SVM ANN and Random Tree," International Journal of Engineering and Advanced Technology, 2019.
10. **Minyechil Alehegn**, Rahul Raghvendra Joshi, and P. Mulay, "Diabetes Analysis and Prediction Using Random Forest, KNN, Naïve Bayes, And J48: An Ensemble Approach," International Journal of Scientific & Technology Research, 2019.
11. **Alehegn, M.**, Joshi, R., & Mulay, P. "Analysis and prediction of diabetes mellitus using machine learning algorithm". International Journal of Pure and Applied Mathematics,2018.

**Conference papers and participations**

1. Using Deep Learning method and Fabry-Perot Filter in Fiber Bragg Grating Sensor Systems P. C. Peng, **M. A. Tefera**, Y. C. Manie, S. H. Liu, T. P. Fan, L. Y. Du, Optics & Photonics Taiwan International Conference (OPTIC 2022), Taiwan.
2. **Minyech1 Alehegn Tefera** "Analysis and prediction of COVID-19 using Deep learning" 3rd National conference on Innovation and challenges in Engineering and technology for sustainable development (ICET-2022, Arba Minch University, university,2022.
3. **Minyechil Alehegn Tefera** "Health system resilience during public health emergency "1st National Conference,2022, Ethiopia.

**Skills**

Programming language: Python, R, Prolog
Deep Learning Framework: TensorFlow, Keras, and others

**Language**

Amharic (native), English(fluent), Chinese(little)