Zekarias T. Kefato

Postdoc researcher

Vita Liljans Väg 66,
127 34, Skärholmen, Sweden

Mobile: (+46) 73 740 6907
Email: zekarias@kth.se
Skype: zekarias.tilahun
Homepage: https://zekarias-tilahun.github.io/zack/

SUMMARY

I am a postdoc researcher and the main area of my research is on graph based machine learning. Starting from my PhD, I have been doing research on graph representation learning (GRL). My current focus is on Graph Neural Networks, contextualized GRL, and Self-supervised GRL. During my research, I have developed a strong knowledge and a set of skills mainly in the following areas, Machine Learning, Data Analysis, Graph Analytics, and Data Visualization.

EXPERIENCE

KTH Royal Institute of Technology, Stockholm/Sweden - *Postdoc Researcher*

June 2019 - PRESENT

University of Trento, Trento/Italy - *Research Assistant*

Nov 2013 - Oct 2014

Ethiopian Information Network Security Agency, Addis Ababa/Ethiopia - *Software Engineer*

Sep 2009 - Aug 2011

I was a full-stack developer using Java & Hibernate, my responsibility was the loan management sub-system of a micro-finance. I have completed designing, developing and deploying the subsystem along with the full system developed by my team. In addition, I was part of a team doing research on Design Patterns.

Microlink Information Technology College, Addis Ababa/Ethiopia - *Assistant Lecturer*

Feb 2008 - Aug 2009

I taught and assisted undergrad level courses, such as Data structure and analysis, Programming in C++, Object oriented programming in Java, and Artificial Intelligence.

CPU Business and Information Technology College, Addis Ababa/Ethiopia - *Guest Lecturer*

June 2008 - Sep 2008

TA for undergrad level Artificial Intelligence course.

EDUCATION

University of Trento, Trento/Italy - *PhD in Computer Science*

Nov 2014 - Apr 2019

University of Trento, Trento/Italy - *MSc in Computer Science*

Sep 2011 - Oct 2013

Microlink Information Technology College - *BSc in Software Engineering*

Sep 2004 - July 2007

Programming and Scripting Languages

Python, R, JavaScript, Java, C++, Scala, Shell Scripting, SQL

Data Science and Machine Learning Tools

- Machine Learning and Data Management Tools
  - PyTorch, Tensorflow, Keras, Apache Spark, MySQL
- Data Analysis Libraries
  - *Python*: Pandas, Numpy, Scipy, scikit-learn, Networkx, …
  - *R*: data.frame, data.table, dplyr, tidyr, tidyverse, ...
- Data Visualization Libraries
  - *Python*: Plotly, Matplotlib
  - *R*: Shiny + Plotly, ggplot
  - *Javascript*: Chart.js, Plotly.js

Professional Services

I. Reviewer: Elsevier Neurocomputing Journal

II. *PC Member*: The Seventh IEEE International Conference on Social Networks Analysis, Management and Security

III. *PC Member*: The Sixth International Conference on Machine Learning, Optimization, and Data Science

IV. *Reviewer*: CCGrid2020 (The 20th IEEE/ACM International Symposium on Cluster, Cloud and Internet Computing)

V. *Reviewer*: Elsevier Pattern Recognition Journal

VI. *Reviewer*: IEEE Transactions on Knowledge and Data Engineering Journal

VII. *PC Member*: The Sixth IEEE International Conference on Social Networks Analysis, Management and Security

VIII. *PC Member*: The Fifth International Conference on Machine Learning, Optimization, and Data Science

IX. *PC Member*: The Fourth International Conference on Machine Learning, Optimization, and Data Science

Publications

1. **Zekarias T. Kefato**, Sarunas Girdzijauskas, Nasrullah Sheikh, and Alberto Montresor. Next Item Prediction using Contextualized Dynamic Embeddings. WWW 2021. (To Appear)
2. **Zekarias T. Kefato**, Sarunas Girdzijauskas. SelfGNN: Self-supervised Graph Neural Networks without explicit negative sampling. The International Workshop on Self-Supervised Learning for the Web 2021, SSL'21 at WWW'21. (Under review).
3. Zamboni, Simone, **Zekarias T. Kefato**, Sarunas Girdzijauskas, Noren Christoffer and L. D. Col. "Pedestrian Trajectory Prediction with Convolutional Neural Networks." ArXiv abs/2010.05796 (2020) (Under review: Elsevier Pattern Recognition Journal).
4. **Zekarias T. Kefato**, Sarunas Girdzijauskas. Gossip and Attend: Context-sensitive Graph Representation Learning. In Proceedings of the Fourteenth International AAAI Conference on Web and Social Media (ICWSM 2020)
5. **Zekarias T. Kefato**, Sarunas Girdzijauskas. Graph Neighborhood Attentive Pooling. ArXiv abs/2001.10394 (2020).
6. **Zekarias T. Kefato** and Nasrullah Sheikh and Alberto Montresor. Which way? Direction-Aware Attributed Graph Embedding. GEM'2020. Sep 2020.

7. Nasrullah Sheikh, **Zekarias T. Kefato**, and Alberto Montresor. A simple approach to attributed graph embedding via enhanced autoencoder. In Proceedings of the Eighth International Conference on Complex Networks and Their Applications (COMPLEX NETWORKS 2019), December 2019.
8. **Zekarias T. Kefato**, Nasrullah Sheikh, Leila Bahri, Amira Soliman, Alberto Montresor and Sarunas Girdzijauskas. CAS2VEC: Network-Agnostic Cascade Prediction in Online Social Networks. IEEE SNAMS'18, Valencia, Spain October 2018, 8 pages **(Best Paper)**.
9. Nasrullah Sheikh and **Zekarias T. Kefato** and Alberto Montresor. Semi-Supervised Heterogeneous Information Network Embedding for Node Classification Using 1D-CNN. SNAMS'18, Oct 2018.
10. **Zekarias T. Kefato**, Nasrullah Sheikh, and Alberto Montresor. REFINE: Representation Learning from Diffusion Events. Fourth International Conference on Machine Learning, Optimization and Big Data, Voltera, Tuscany, Italy, September 2018, 12 pages.
11. Nasrullah Sheikh, **Zekarias T. Kefato**, and Alberto Montresor. GAT2VEC: Representation learning for attributed graphs. Computing Journal, 2018.
12. **Zekarias T. Kefato**, Nasrullah Sheikh, and Alberto Montresor. Mineral: Multi-modal Network Representation Learning. Third International Conference on Machine Learning, Optimization and Big Data, Voltera, Tuscany, Italy, September 2017, 12 pages
13. **Zekarias T. Kefato**, Nasrullah Sheikh, and Alberto Montresor. DeepInfer: Diffusion Network Inference through Representation Learning. In Proceedings of 13th International Workshop on Mining and Learning with Graphs, MLG'17, Halifax, Nova Scotia, Canada, August 2017, 8 pages

Programming Languages

1. Received the Best Paper Award for IEEE SNAMS 2018.
2. Gold Medalist for the highest GPA from Microlink Information Technology College 2007 graduates
3. Certificate of Merit for the best final project of Software Engineering graduates of Microlink Information Technology College, 2007

Languages

	Language	**Level**
1.	Amharic	Native
2.	English	Proficient
3.	Italian	Conversational

References

Name	**Email**	**Affiliation**
Sarunas Girdzijauskas	sarunasg@kth.se	Postdoc Supervisor
Alberto Montresor	alberto.montresor@unitn.it	PhD Advisor
Themis Palpanas	themis@mi.parisdescartes.fr	MSc Thesis Advisor