Volodymyr Miz

mizvol | volodymyrmiz | blog.miz.space | @ mizvladimir@gmail.com

WORK EXPERIENCE

EPFL | Doctoral and Teaching Assistant
Mar 2016 – present (est. Nov 2020) | Lausanne, Switzerland

- Selected as one of 5 Ph.D. students to do consulting in Machine Learning for IMD Business School based on academic success and presentation skills.
- Led a team of 3 MSc students. Resulted in a publication [3].
- Gave lectures on data visualization for a class of ~150 students (JavaScript, Gephi, ML on graphs).

FIRMENICH | ML Reseach Consultant
Jan 2020 - Jul 2020 | Lausanne, Switzerland

- Designed and implemented a Machine Learning model for chemical formula classification (Python, PyTorch).
- Increased performance by 10-20% compared to conventional classification models.

IST LISBON | Research Intern
Apr 2018 – Jul 2018 | Lisbon, Portugal

- Optimized a network inference algorithm achieving 3x speedup over an existing implementation (Python).

ECHOSTAR | Software Engineer
Sep 2012 – Mar 2016 | Kharkiv, Ukraine

- Developed remote control services for 2M customers worldwide. Was promoted to Project Lead (SQL, Java).
- Worked on UI and features for an automated hardware testing suite (C#, JavaScript, HTML/CSS, OpenCV).

AWARDS

HACKERNEWS | Top 10, 1 Oct 2017
Oct 2017 | https://hckrnews.com/

- My research **blog post** was highlighted in the Top 10 on Hacker News and received 10K visits over 24h.

IT KHARKIV | Best startup in Cloud Computing
Nov 2013 | Kharkiv, Ukraine

- Selected among 4 out of 73 participants for Best Startup Presentation Award.

NURE | Faculty award
Jul 2013 | Kharkiv, Ukraine

- Selected as one of 21 students for exceptional success during graduate studies.

MICROELECTRONICS OLYMPIAD | Best result
Oct 2012 | Yerevan, Armenia

- Selected as one of 43 finalists worldwide and received the Best Result Award (Ukraine).

EDUCATION

EPFL
Ph.D. in Electrical Engineering. Graph ML
Mar 2016 – present (est. Nov 2020) | Lausanne, Switzerland

UNIVERSITY OF RADIO ELECTRONICS
BSc, MSc in Computer Engineering
Jul 2013 | Kharkiv, Ukraine

RESEARCH

OLFACTORY ML MODEL | ML Researcher
Apr 2019 – present (under development)

- Created a Machine Learning model to classify smells based on chemical formulas. Outperformed 5 baselines by up to 20% (Python, PyTorch, Deep Learning).

PATTERN DETECTION IN DYNAMIC GRAPHS | ML Researcher
Sep 2018 – present (Ph.D. thesis)

- Designed and implemented a pattern detection algorithm for large-scale graphs using neural networks (Scala, Python, Apache Spark, NLP) [4].

WIKIPEDIA RESEARCH | Open Source Contributor
Nov 2018 – present

- Scaled my pattern detection algorithm to the entire Wikipedia graph (Scala, Apache Spark, NLP).
- Contributed to a large-scale data processing framework SparkWiki to facilitate research on Wikipedia graph and time-series data (Scala, Apache Spark, Neo4J, NLP) [1]
- Designed queries for Wikipedia graph database (Neo4J).

FAKE NEWS ANALYSIS | Data Scientist
Jul 2018 – Sep 2020

- Implemented a web-based tool for RTS journalists to discover filter bubbles in YouTube recommendations for controversial content (Python, JavaScript, YouTube API).

COLLECTIVE BEHAVIOR ANALYSIS | ML Researcher
Jan 2017 – May 2018

- Created and implemented an ML framework for collective behavior analysis and user segmentation in social networks [2] (Scala, Python, Apache Spark, NLP).

SKILLS

TECHNICAL SKILLS
• Python • Scala • JavaScript • SQL • Graph DBs • Statistics • Apache Spark • Visualization • Machine Learning Algorithms • Graph Theory • Research • Statistics • Data Mining • R • TensorFlow • PyTorch • Deep Learning • AI • NLP • AWS

SOFT SKILLS
• Leadership • Teaching • Public Speaking and Presentation • Multicultural Communication • Team player

LANGUAGES

Foreign: • English (C2) • French (B2) • German (A1)
Native: • Russian • Ukrainian

HOBBIES

• Basketball. Finalist of Ukrainian National League U16 (2007), champion of Swiss Vaudoise League (2018) and Cup (2019)
• Playing piano • Skiing • Mountaineering

SELECTED PUBLICATIONS

[1] N. Aspert, V. Miz, B. Ricaud, and P. Vandergheynst. A graph-structured dataset for wikipedia research. In *Companion Proceedings of The Web Conference 2019*, pages 1188–1193, 2019.

[2] V. Miz, K. Benzi, B. Ricaud, and P. Vandergheynst. Wikipedia graph mining: dynamic structure of collective memory. *arXiv preprint arXiv:1710.00398*, 2017.

[3] V. Miz, J. Hanna, N. Aspert, B. Ricaud, and P. Vandergheynst. What is trending on wikipedia? capturing trends and language biases across wikipedia editions. In *Companion Proceedings of The Web Conference 2020*. ACM, 2020.

[4] V. Miz, B. Ricaud, K. Benzi, and P. Vandergheynst. Anomaly detection in the dynamics of web and social networks using associative memory. In *Proceedings of The Web Conference 2020*, pages 1290–1299, 2019.

See full list on Google Scholar