Mykola Lukashchuk

✉ lukashuk.nikola@gmail.com   •   ⌨ Nimrais

Education

Instituto Politécnico Nacional   **Mexico City, Mexico**
Computing Research Center   *2020.01–2021.11*
Master in Computer Science (certified as international quality level
program by the Mexican Ministry of Science – CONACYT),
Thesis: *Multi-target sequence analysis with a Transformer*
Advisor: Prof. Dr. Alexander Gelbukh (citations: 10444, h-index: 49;
member of the Mexican Academy of Sciences)

Taras Shevchenko National University of Kyiv   **Kyiv, Ukraine**
Faculty of Mechanics and Mathematics   *2019.09–2021.05*
Master in Statistics,
Thesis: *On the probability of exceeding some polynomial curve
by subgaussian random process*
Advisor: Prof. Dr. Rostyslav Yamnenko (citations: 96, h-index: 6)

Taras Shevchenko National University of Kyiv   **Kyiv, Ukraine**
Faculty of Mechanics and Mathematics   *2015.09–2019.06*
BSc in Statistics,
Thesis: *Classification of a mixture with a varios concentration*
Advisor: Prof. Dr. Rostyslav Maiboroda (citations: 69, h-index: 5)

Achievements and Awards

- Winner 2021 ODS (An international community of data science professionals, researchers and engineers) based summer of code hackathon - metric learning track
- Full MSc scholarship 2020–2021 for top performing students, Government of Mexico
- Full MSc scholarship 2020–2021 for top performing students, Government of Mexico
- Full BSc scholarship 2015–2019 for top performing students, Government of Ukraine
- 5th place (out of 34 teams), national machine learning competition, 2018 Vodafone Music Challenge: predicting whether subscriber is a Vodafone Music user, as a member of the team Platypuses (2 members)
- 662th place (top 25% out of 2815 teams), online qualification round, 2017 Hash Code, international Google Coding Competition, as a member of the team Platypuses (3 members)
- 2nd place IT-Hackaton 2016 hosted at Taras Shevchenko National University of Kyiv, as a member of the team Platypuses (5 members)

Experience

NLP Enginner **Remote**

Verb AI *2020–2021*

AI-focused service helps people maintain
personal accountability, fitness, and stress by learning their habits.

My role is to discover, evaluate and apply the latest research in natural language processing (NLP) and machine learning to analyse and classify user chats in real-time and to build a chatbot assitant (conversational engine).

- Implemented in the conversational engine:
    - The engine notify coaches about advice or support phrases which they missed;
    - The engine can take part in a dialog autonomously;
    - The engine classifies user's message;
    - The engine extracts from user's message statistics: quality and types of training, food types, etc;
- Deploying the models on AWS EC2 using Docker;

Data Scientist **Kyiv, Ukraine**

Artellence *2019–2020*

The business intelligence company (social network analysis).

My role was to build tools for the structuring of text streams from Facebook (Topic Extraction, Named Entity Recognition, Sentiment Analysis) and to build credit scoring models based on user data from Facebook.

- Analyzed of influence of social network bots (Developed NLP models for Topic Extraction, Sentiment Analysis on the result of the presidential elections in Ukraine. The research was done in collaboration with Vox Ukraine;
- Worked on credit scoring model for companies Moneyveo, Cashberry, etc;
- Built a search engine based on parsed data for supporting generator of an advertisement headlines;

Machine Learning Engineer **Kyiv, Ukraine**

Consaltivate *2018–2019*

The business intelligence company (consulting).

- Implement a label tagging engine on allergens for the Nestlé research department;
- Designed and implemented machine learning pipelines for raw data of different types to generate, re-sample and retrieve features;

Junior Python Developer **Kyiv, Ukraine**

Edelborn (job board) *2017–2018*

- Implemented crawlers infrastructure;
- Made a model for analyzing crawled data and retrieved from it most valuable info;

Technical Skills

Programming Languages: Python, Scala, Julia, R, Bash Script

Technologies: PyTorch, Tensorflow, NLTK, Docker, Git, Flask, Django, Dask, MongoDB, SQL

Languages

English: C1

Spanish: A2

Russian: native

Ukrainian: native

Conferences and Schools Attended

- Regular presenter and attendee, 2018–present, the weekly Bayesian Research Seminar based at Taras Shevchenko National University, Ukraine.

- Regular presenter and attendee, February 2020–present, the weekly Research Seminar, Computing Research Center, Instituto Politécnico Nacional, Mexico.
- Presenter and attendee, Mexican International Conference of Artificial Intelligence, MICAI 2020, Mexico City.
- Attendee, 12th Mexican Conference of Artificial Intelligence, COMIA 2020, Ciudad Juárez, Chihuahua, México Universidad Autónoma de Ciudad Juárez, UACJ.
- Volunteer and attendee, 2020 IEEE SMCS international meeting, Mexico city, Mexico.
- Attendee, 2017 fall school (one week) on applied mathematics and statistics (lectors were from Germany and the USA), Taras Shevchenko National University of Kyiv, Ukraine.
- Attendee, 2015 fall school (one week) on applied mathematics and statistics (lectors were from Germany and the USA), Taras Shevchenko National University of Kyiv, Ukraine.

References

Dr. Alexander Gelbukh
Computing Research Center
Instituto Politécnico Nacional
Ciudad de Mexico, 07738, Mexico
✉ gelbukh@gelbukh.com

Dr. Rostyslav Yamnenko
Department of Probability Theory, Statistics and Actuarial Mathematics
Taras Shevchenko National University of Kyiv
Kyiv, 02000, Ukraine
✉ yamnenko@univ.kiev.ua

Head of Research Sergey Kolesnikov
Tinkoff AI Center
Tinkoff bank
Moscov, 125130, Russia
✉ scitator@gmail.com

Publications

1. M. Lukashchuk, O. Osipov, Y. Kostiuk, A. Gelbukh, and G. Sidorov. "RoBERTa wordwise sentiment multi-label classification". In: *Mexican International Conference of Artificial Intelligence, MICAI 2020. Mexico City*. 2020.

2. M. Lukashchuk, Y. Kostiuk, O. Osipov, A. Gelbukh, G. Sidorov, and P. J. Escamilla-Ambrosio. "Analysis of news influence on financial coefficients on insurance data". In: *Mexican International Conference of Artificial Intelligence, MICAI 2020. Mexico City*. 2020.

3. V. Zubchenko, Y. Kostiuk, M. Lukashchuk, and A. Yaroshevskyi. "Rating change classification of insurance companies indicators". In: *Bulletin of Taras Shevchenko National University of Kyiv. Series: Physics and Mathematics* 1-2 (2020), pp. 31–35. DOI: https://doi.org/10.17721/1812-5409.2020/1-2.4.

4. M. Lukashchuk, Y. Kostiuk, G. Sidorov, and A. Gelbukh. "Prior latent distribution comparison for the Variational Autoencoder in Low-Resource Natural Language Modeling". Submitted to LKE 2021.

5. <u>M. Lukashchuk</u> and R. E. Yamnenko. "On the probability of exceeding some polynomial curve by subgaussian random process". In progress (this paper is based on my master thesis).

6. <u>M. Lukashchuk</u> and A. Gelbukh. "Divergence-Twins: A Simple Prior Free Framework for Contrastive Learning of Visual Representations". In progress.