Evgeny Krivosheev

Email: evgeny.krivosheev@unitn.it   Github: Evgeneus   Personal page: krivosheev.me

Post-Doctoral researcher in Deep Learning and hybrid Human-AI systems aspiring to build a career in the Technology sector with a focus on applied AI and data-driven solutions.

RELEVANT SKILS

- -Machine Learning
- -Deep Learning
- -Computer Vision

- -Domain Adaptation
- -Graph Neural Networks
- -Self-Supervised Learning

- - Data Fusion and Crowdsourcing
- - Natural Language Processing
- - Statistics

Languages/Tools:

Python, PyTorch, Scikit Learn, Pandas, Numpy, Matplotlib, Notebook, NLTK, Django, Google Cloud, Git.

Neural Networks: CNN, ResNet, Graph-CNN, RNN, Vision Transformers, Mask-Rcnn, Yolo-V3, GANs.

Unsupervised/Self-supervised: Deep Cluster, K-Means, Byol, SimCLR, SimSiam, MoCo, BERT, Word2Vec.

WORK EXPERIENCE

University of Trento, Multimedia group (Trento, Italy)   June 2020 - present (1 year)
Post-Doc in Computer Vision

- Developed a deep learning framework for Unsupervised Domain Adaptation pivoted around Graph Neural Aggregation, GANs, and Curriculum learning, achieving +5% improvement in accuracy with respect to the state-of-the-art algorithm (accepted at CVPR 2021, see project page).
- Implemented several Self-Supervised visual models (SimCLR, Moco, Byol, Deep Cluster), customised them with Ensemble training and Data augmentations (MixUp, CutMix), improving the accuracy by 2%.
- Supervised students in technical and methodological aspects in research projects.

IBM Research (Zurich, Switzerland)   2019 (6 months)
Deep Learning intern

- Invented and programmed Self-Supervised Graph Convolutional Net for linking business entities from text to relational database (Dun & Bradstreet) resulting in +7% linkage improvement for Swiss business entities with respect to the current IBM linkage system (accepted as AAAI 2021 paper).
- Deployed the Graph Convolutional Net as a web service with PyTorch, Flask, Docker (see demo).

IBM Benelux & TU Delft (Amsterdam, Netherlands)   2018 (3 months)
Machine Learning Intern

- Developed Active Learning and Adaptive Human-ML classification algorithms for balancing between training ML models and acquiring reliable training data.
- Reduced document classification cost by 10% while improved accuracy by 5% over several classification tasks with respect to state-of-the-art approaches (two NeurIPS publications).

Pi School (Rome, Italy)   2017 (2 months)
Deep Learning intern

- Engineered an LSTM-based model and its prototype detecting ransomware with 85% precision via the analysis of user activity logs in the operating system (for memopal.com, a backup company).

Purdue University (West Lafayette, IN, USA)   2016 (4 months)
Data Fusion Intern

- Designed a Probabilistic Graphical Model for aggregating data from multiple sources of information.
- Derived and implemented a fusion inference procedure based on Markov Chain Monte Carlo sampling and Expectation-Maximisation methods (published at VLDB conference).

iTechArt (Minsk, Belarus)   2015 (6 months)
Python Software Engineer

- Developed RESTful endpoints and features in admin interface for classspass.com company (Django, JS).
- Troubleshooted backend, database problems that speeded up SQL queries and email services.

EDUCATION

University of Trento (Trento, Italy)   2016 - 2020

PhD in Informatics (Cum Laude), advisor Prof. Fabio Casati

- Developed a number of cost-aware crowdsourcing, active learning and hybrid crowd-machine learning algorithms for item classification for low-risk decision making.
- Main author of 9 papers published on top-tier conferences (WWW, AAAI, NeurIPS, VLDB, HCOMP, CSCW).
- Co-supervised students and interns in research projects.

Belarusian State University (Minsk, Belarus)   2011 - 2016

Specialist in Information Systems and Radiophysics (equivalent to Master degree)

PROFESSIONAL ACTIVITIES

Program committee member at NurIPS 2020 workshop, poster session chair at ICPR 2020, invited speaker at PiSchool 2020, reviewer at WSDM 2020, WWW 2018, WWW 2017, ICWE 2017, BPM 2017.

SELECTED PUBLICATIONS

Curriculum Graph Co-Teaching for Multi-Target Domain Adaptation **CVPR 2021**, Subhankar Roy*, Evgeny Krivosheev*, Zhun Zhong, Nicu Sebe, Elisa Ricci, * - equal contribution.

Business Entity Matching with Siamese Graph Convolutional Networks **AAAI 2021.**
Evgeny Krivosheev, Mattia Atzeni, Katsiaryna Mirylenka, Paolo Scotton, Christoph Miksovic, Anton Zorin.

Spatial Graph Convolutional Network for Pose-Guided Person Image Generation, **ICCV 2021** (under review), Jichao Zhang, Hao Tang, Jingjing Chen, Nicu Sebe, Evgeny Krivosheev, Mengyi Zhao.

Active Hybrid Classification, **NeurIPS 2020** workshop, Evgeny Krivosheev, Fabio Casati, Alessandro Bozzon

Crowd-based Multi-Predicate Screening of Papers in Literature Reviews, **WWW 2018**,
Evgeny Krivosheev, Fabio Casati, Boualem Benatallah.

LANGUAGIES

English (Fluent), Russian (Native)

REFERENCES

Prof. Dr. Nicu Sebe, Head of Dept. of Information Engineering and Computer Science, Huawei Research Ireland, email: niculae.sebe@unitn.it

Dr. Abdel Labbi, Department Manager Cognitive Computing & Industry Solutions, IBM Research Zurich, Switzerland, email: abl@zurich.ibm.com

Dr. Paolo Scotton, Team Lead & Research Staff Member, IBM Research Zurich, Switzerland,
email: psc@zurich.ibm.com

Prof. Dr. Fabio Casati, Principal Machine Learning Engineer, ServiceNow, USA, and University of Trento, email: fabio.casati@servicenow.com

Prof. Dr. Alessandro Bozzon, Department of Electrical Engineering, Mathematics and Computer Science, Delft University of Technology, Netherlands, email: a.bozzon@tudelft.nl