Denis Yarats

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RESEARCH

My research interest is to develop intelligent agents that can communicate with people and perform useful tasks, with the ultimate ambition to liberate people from the burden of mundane routines. I want to advance the areas of NLP and RL through my research, as they allow the emergence of agents that can evolve over time through their interaction, which is an essential trait of intelligence.

EXPERIENCE

Facebook AI Research   June 2016 - Present
Research Engineer   *Menlo Park, CA*

I focus my research on advancing methods of NLP and RL in the settings of goal-oriented dialogues. Prior to this, I worked on developing state of the art algorithms for Machine Translation.

Quora   September 2013 - June 2016
Staff ML Engineer   *Mountain View, CA*

I served as a tech lead on the ML team and supported multiple large scale projects, such as engineering a distributed training framework and a real time ranking system. I also developed ranking and content understanding algorithms and enhanced data and release infrastructure. I provided a scalable and performant implementation for various ML algorithms, some of my work was open sourced (http://github.com/quora/qmf).

Bing, Microsoft   November 2011 - September 2013
Software Engineer   *Bellevue, WA*

I worked on improving the relevance of the search engine. In particular, I enhanced the performance and accuracy of the entity conflation algorithm by means of clusterization and classification. In addition, I reduced the latency of the ingestion data pipeline by optimizing the underlying algorithms and developing distributed analogues.

Yandex   June 2011 - November 2013
Software Engineer   *Moscow, Russia*

I focused on building an algorithm to generate predictions for car traffic jams in Moscow, with the goal to improve the city's severe road congestion. I developed an ML solution that leveraged both offline data and real-time signals in order to reliably forecast roadblocks.

PUBLICATIONS

Hierarchical Text Generation and Planning for Strategic Dialogue   *December 2017*
D.Yarats*, M. Lewis*. Preprint.

Deal or No Deal? End-to-End Learning for Negotiation Dialogues   *June 2017*
M. Lewis, **D. Yarats**, Y. Dauphin, D. Parikh, D. Batra. EMNLP 2017.

Convolutional Sequence to Sequence Learning   *April 2017*
J. Gehring, M. Auli, D. Grangier, **D. Yarats**, Y. Dauphin. ICML 2017.

TALKS

Convolutional Sequence to Sequence Learning *November 2017*
Treehouse Talk at CLMS, University of Washington.

Convolutional Sequence to Sequence Learning *September 2017*
International Conference on Artificial Intelligence (www.aiukraine.com).

PRESS COVERAGE

Deal or no deal? Training AI bots to negotiate *June 2017*
http://code.facebook.com/posts/deal-or-no-deal-training-ai-bots-to-negotiate.

A novel approach to neural machine translation *May 2017*
http://code.facebook.com/posts/a-novel-approach-to-neural-machine-translation.

TEACHING

Introduction to Deep Learning *September 2016 - Present*
Teaching assistant, Facebook.

Discrete Mathematics and Algorithms *September 2011 - November 2011*
Lecturer, Yandex School of Data Analysis.

EDUCATION

Belarusian State University *June 2011*
M.S. in Computer Science & Math.

Belarusian State University *June 2010*
B.S. in Computer Science & Math.

SKILLS

PyTorch/Torch, Python, C/C++, CUDA, LaTeX.

ACHIEVEMENTS

ACM ICPC World Final *May 2011*
Orlando, USA.

Google Code Jam European Final *October 2008*
Zurich, Switzerland.

REFERENCES

Michael Lewis
Research Scientist, Facebook AI Research
email: mikelewis@fb.com

Dhruv Batra
Assistant Professor, Georgia Institute of Technology
email: dbatra@gatech.edu

Larry Zitnick
Research Manager, Facebook AI Research
email: zitnick@fb.com