Benjamin Rozonoyer

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Ph.D. in CS, UMass Amherst, advised by Andrew McCallum (GPA 3.88)	2022-
M.S. in Computational Linguistics (CL), Brandeis University (GPA 4.0)	2020-2021
Master's Thesis "Graph Convolutional Encoders for Syntax-aware AMR Parsing"	
B.S. in CS, Linguistics, Math, Brandeis University (Magna Cum Laude, GPA 4.0)	2016-2020

PhD Coursework

ML, RL, Probabilistic Graphical Models, Advanced Algorithms, Distributed Systems

Skills

Programming Languages: Python, Java, Julia, Scheme

ML+NLP Toolkits: HF Transformers, numpy/scipy, sklearn, wandb, networkx, spaCy, Stanza

Deep Learning Frameworks: PyTorch, MXNet/Gluon, Keras, DGL, TensorFlow

OS: Linux/Unix, Slurm, basic bash scripting

Other: Git, Docker, PyMongo, RDF (SPARQL, SHACL)

Work Experience

Charles River Analytics (Summer 2023):

Transformer-based contrastive learning for authorship identification on IARPA HIATUS that brought CRA's performance from last (6th) to 2nd place in eval; probabilistic modeling in Pyro for generation/inference of military activity patterns

Raytheon BBN (June 2019-August 2022):

multilingual information extraction (DARPA AIDA); maintained internal NLP and deep learning libraries and integrated open-source/research models; supported full NLP stack for machine reading system (IARPA COVID Seedling); multilingual RE system using MT and MGIZA++ for token-level annotation projection to train mBERT model

Research assistant (Brandeis) for BiRCh corpus creation project:

morphological analysis/parsing; segmentation/sentence tokenization; transcription; adjudication; Russian statistical NP chunker

Teaching assistant (Brandeis):

Discrete Structures, Theory of Computations, Data Structures & Algorithms, Phonology, Structure & Interpretation of Computer Programs, Statistical Approaches to NLP (grad-level)

Independent study (Summer 2018):

implemented Braverman parameter clusterization algorithm

Academic Awards

Aravind K. Joshi Award for Outstanding Achievement in Computational Linguistics	2021
Giumette Academic Achievement Award	2018
Phi Beta Kappa, inducted as junior	2019
Brandeis Humanities Fellowship	2016-2020

Publications & Conference Presentations

Zhao, Jiachen, Wenlong Zhao, Andrew Drozdov, **Benjamin Rozonoyer**, Md Arafat Sultan, Jay-Yoon Lee, Mohit Iyyer, and Andrew McCallum. "[Multistage Collaborative Knowledge Distillation from Large Language Models](#)." *arXiv preprint arXiv:2311.08640* (2023).

Benjamin Rozonoyer, Michael Selvaggio, David Zajic and Ilana Heintz. [Claim Extraction via Subgraph Matching over Modal and Syntactic Dependencies](#) *(Designing Meaning Representations 2023 workshop)*

Min, Bonan, **Benjamin Rozonoyer**, Haoling Qiu, Alexander Zamanian, and Jessica MacBride. "[ExcavatorCovid: Extracting Events and Relations from Text Corpora for Temporal and Causal Analysis for COVID-19](#)." (*EMNLP 2021, System Demonstration track*).

[Graph Convolutional Encoders for Syntax-Aware AMR Parsing](#) (*Masters Thesis, Brandeis, 2021.*)

Benjamin Rozonoyer and Erik Andersen, "A Morphological Analyzer for Blackfoot Nouns", *Society for the Study of the Indigenous Languages of the Americas (SSILA) conference 2021* (*Analyzer under development at* https://github.com/brozonoyer/Blackfoot)

Andersen, Erik, and **Benjamin Rozonoyer**. "[A Small Universal Dependencies Treebank for Hittite](#)" *Proceedings of the Fourth Workshop on Universal Dependencies (UDW 2020)*

"[Aguaruna speculative clause: Evidentiality meets focus](#)", *Proceedings of the Linguistic Society of America* (*LSA 2020*)

Professional Activities

NAACL 2022 Industry Track reviewer
EMNLP 2022 Industry Track program committee
EMNLP 2023 reviewer

Languages

English and Russian (native), Spanish, Ancient Greek, Church Slavonic, Old Irish, Latin, Blackfoot

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Other Coursework

Computer Science:

Data Structure & Algorithms, Discrete Structures, Object-Oriented Programming, Operating Systems, Theory of Computation, Structure & Interpretation of Computer Programs, Programming Language Theory, Fundamentals of Computational Linguistics, Machine Translation, Information Extraction, Statistical Approaches to NLP, Annotation for ML

Math:

Linear Algebra, Multivariable Calculus, Differential Equations, Intro to Abstract Algebra, Combinatorics, Complex Analysis, Numerical Methods & Big Data

Linguistics:

Formal Semantics, Syntax, Phonology, Phonetics, Linguistic Typology, Historical Linguistics, Morphology, The Lexicon, Speech Acts

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