

Anton BELY

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EDUCATION

SEP '19 — PRESENT	PhD in Computer Science (NLP) , Johns Hopkins University, USA Advisors: Benjamin Van Durme (Primary), Vladimir Braverman (Secondary) <ul style="list-style-type: none">• M.Sc.Eng. degree expected in May 2022. GPA: 4.0
SEP '13 — MAY '18	B.Sc. in Informatics and Applied Mathematics , ITMO University, Russia Thesis: Construction and Quality Evaluation of Heterogeneous Hierarchical Topic Models <ul style="list-style-type: none">• Distinguished thesis award (given to 2 out of approx. 50 undergraduates)

EMPLOYMENT

JUN '21 — SEP '21	Research Intern , Microsoft Semantic Machines, USA <ul style="list-style-type: none">• Built guided annotation interface to help label semantic parsing data 35% faster [preprint]
SEP '19 — PRESENT	Graduate Research Assistant , Johns Hopkins University, USA <ul style="list-style-type: none">• Semantic data mining: proposed novel ARM-based algorithm for script induction [paper], built SchemaBlocks, Scratch-like annotation interface for complex event scenarios [preprint]• Knowledge base completion: building a human-in-the-loop system to “complete” Wikidata based on triples inferred from Wikipedia list articles and verified by an expert (<i>current project</i>)• Text generation: built demo for InFillmore, our FrameNet frame-guided NLG model [paper]
SEP '17 — SEP '19	Senior Data Scientist in Compliance Risks and AI lab , Tochka Bank, Russia <ul style="list-style-type: none">• Risk scoring: vectorized new data sources for 200K+ bank clients and 50M+ transactions, generated temporal/spatial features using Hadoop/Spark to improve scoring accuracy by 10%• Communication analysis: built intent recognition models to classify 90% customer inquiries• Call center planning: using OR-Tools, automated CC planning while improve accuracy by 10%• ML culture: interviewed and mentored 3 junior ML engineers, designed internal ML guidelines
SEP '16 — MAY '18	Undergraduate Research Assistant (part-time), ITMO University, Russia <ul style="list-style-type: none">• Exploratory search via topic models: built framework for document-level semantic search using interpretable TMs [1, 2, 3]. Built system demo using MongoDB, ZeroMQ, and FoamTree• Plagiarism detection: proposed novel evaluation framework [paper] and ML model [paper]
SEP '15 — SEP '16	Software Engineer in Ads , VK.com, Russia <ul style="list-style-type: none">• URL fraud: built service to periodically detect malicious URL redirect changes in VK ads• Click fraud: built ML models to detect users that generate fraudulent clicks in VK ad network. Model was deployed semi-automatically and helped recover up to 3% monthly ad revenue• Ads search: launched moderator search interface (incl. full-text search) over 30M+ VK ads• Ads scoring: implemented advertiser ranking for faster moderation of top-10% clients
JUN '15 — SEP '15	Software Engineer Intern in .NET tools , JetBrains, Russia <ul style="list-style-type: none">• Implemented methods for automatic memory leak detection in the dotMemory profiler

TEACHING EXPERIENCE

JAN '21 — MAY '21	Introduction to Algorithms 601.433/633 (Head TA) , JHU (100+ students) <ul style="list-style-type: none">• Managed 9 CAs and 1 TA, created homework and exam problems, held weekly office hours
SEP '17 — SEP '19	Natural Language Processing (TA) , Coursera (40,000+ students by Sep '19) <ul style="list-style-type: none">• Answered 200+ students' questions, helped create homework and project assignments

LANGUAGES AND TECHNOLOGIES

LANGUAGES	Python (proficient); JavaScript, bash (intermediate); C#, C++, Haskell, x86 assembly (coursework)
TECHNOLOGIES	pandas, sklearn, XGBoost, pytorch, faiss, nmslib; Docker, *SQL, MongoDB, Lucene, Hadoop/Spark