

Martin Fajčík

Researcher

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Google Scholar



Education

- 2017–2024 **Ph.D.**, *Brno University of Technology*, Brno, Czechia
Ph.D. thesis on Factoid Question Answering and Fact-checking
- 2015–2017 **M.Sc. Intelligent Systems**, *Brno University of Technology*, Brno, Czechia
M.Sc. thesis focusing on the stochastic optimization applied in automated processor verification
- 2012–2015 **B.Sc. Information Technology**, *Brno University of Technology*, Brno, Czechia
B.Sc. thesis focusing on the development of static analysis and quick fix functionality for CodAL architecture description language

Experience

- 2024–Present **Postdoctoral Researcher**, *Brno University of Technology*, Brno, Czechia
Research interests: sequential architectures, LLM benchmarking, retrieval, fact-checking
Projects: FactDeMice (PI), ELOQUENCE (co-solver)
- 2017–2024 **Research Assistant**, *Brno University of Technology*, Brno, Czechia
Research assistant & Ph.D. candidate
- Nov **Research Assistant**, *IDIAP Research Institute*, Martigny, Switzerland
- 2021–Dec Supervisor: Petr Motlíček
- 2022 Research related to Criteria H2020 Project
- June **Java/Python Developer**, *Codasip*, Brno, Czechia
- 2015–Oct Development of Eclipse IDE plugins, CodAL language editor, python/bash scripts, and simple javascript front-ends based on doT.js. Design of miscellaneous Java APIs.
- 2017

Publications

- 2025 Jarolím, A., Fajčík, M., & Makaiová, L. (2025). Can LLMs extract human-like fine-grained evidence for evidence-based fact-checking? *Proceedings of the 19th Workshop on Recent Advances in Slavonic Natural Language Processing (RASLAN 2025)*.
- 2025 Makaiová, L., Fajčík, M., & Jarolím, A. (2025). Examining the Metrics for Document-Level Claim Extraction in Czech and Slovak. *Proceedings of the 19th Workshop on Recent Advances in Slavonic Natural Language Processing (RASLAN 2025)*.
- 2025 Fajčík, M., Dočekal, M., Dolezal, J., Ondřej, K., Beneš, K., Kapsa, J., Smrž, P., Polok, A., Hradis, M., Neverilová, Z., & others. (2025). Benczechmark: A Czech-centric multitask and multimetric benchmark for large language models with duel scoring mechanism. *Transactions of the Association for Computational Linguistics*, 13, 1068–1095.
- 2024 Stetina, J., Fajčík, M., Štefánik, M., & Hradis, M. (2024). A Comparative Study of Text Retrieval Models on DaReCzech. *Proceedings of the 18th Workshop on Recent Advances in Slavonic Natural Language Processing (RASLAN 2024)*, pp. 85–100.

- 2023 Fajčík, M., Motliceck, P., & Smrz, P. (2023). Claim-Dissector: An Interpretable Fact-Checking System with Joint Re-ranking and Veracity Prediction. *Findings of the Association for Computational Linguistics: ACL 2023*.
- 2022 Fajcik, M., Singh, M., Zuluaga-Gomez, J., Villatoro-Tello, E., Burdisso, S., Motliceck, P., & Smrz, P. (2022). IDIAPers @ Causal News Corpus 2022: Extracting Cause-Effect-Signal Triplets via Pre-trained Autoregressive Language Model. *Proceedings of the 5th Workshop on CASE* (pp. 70–78).
- 2021 Fajcik, M., Jon, J., & Smrz, P. (2021). Rethinking the Objectives of Extractive Question Answering. *Proceedings of the 3rd Workshop on Machine Reading for Question Answering* (pp. 14–27).
- 2021 Fajcik, M., Docekal, M., Ondrej, K. & Smrz, P. (2021). R2-D2: A Modular Baseline for Open-Domain Question Answering. *Findings of the Association for Computational Linguistics: EMNLP 2021*.
- 2021 Min, S., et al. (2021). NeurIPS 2020 EfficientQA Competition: Systems, Analyses and Lessons Learned. *Proceedings of Machine Learning Research*. PMLR.
- 2020 Fajcik, M., Jon, J., Docekal, M. & Smrz, P. (2020). BUT-FIT at SemEval-2020 Task 5: Automatic Detection of Counterfactual Statements with Deep Pre-trained Language Representation Models. *Proceedings of the Fourteenth Workshop on Semantic Evaluation* (pp. 437–444).
- 2019 Fajcik, M., Smrz, P. & Burget, L. (2019). BUT-FIT at SemEval-2019 Task 7: Determining the Rumour Stance with Pre-Trained Deep Bidirectional Transformers. *Proceedings of the 13th International Workshop on Semantic Evaluation* (pp. 1097–1104).
- 2017 Fajcik, M., Smrz, P. & Zachariasova, M. (2017). Automation of Processor Verification Using Recurrent Neural Networks. *2017 18th International Workshop on MTV* (pp. 15–20). IEEE.

Projects

- Jan 2025 – **FactDeMice**, *TACR bilingual CZ-TW grant TQ16000028*, Principal Investigator
 Present Building the “FactDeMice Toolkit”: an AI-driven system for multilingual fact-checking in news comment sections based on automatic community notes generation—including automatic claim-extraction, evidence-based verification and translation (English, Czech, Mandarin). Aims to support journalists, analysts and organizations in combating misinformation.
- Jan 2024 – **ELOQUENCE (Multilingual Conversational AI)**, *EU Horizon Europe grant 101135916*
 Present Research & development of multilingual, bias-controlled conversational AI and voice/chat-bot technologies for safety-critical applications (e.g. emergency services, smart-home assistants). Development of explainable, knowledge-grounded and ethically aligned dialogue systems; hybrid LLM / speech-understanding methods; pilot implementations and validation across diverse EU languages.
- May 2023– **semANT – Semantic Document Exploration**, *NAKI grant DH23P03OVV060*
 July 2025 Improving the possibilities of searching in the full-text representation of digitized historical documents at the level of text meaning and the possibilities of natural navigation between thematically similar documents.
- Jan 2021–Apr 2024 **MASAPI – Multilingual assistant**, *TACR grant FW03010656*
 Building the assistant that processes available information (local files, e-mails, indexed websites) in commonly used formats and supported languages, builds a knowledge base, replies to user’s queries and looks up support for results in indexed documents.
- Nov **Criteria**, *EU H2020 grant 101021866*
- 2021–Dec Comprehensive data-driven Risk and Threat Assessment Methods for the Early and Reliable Identification, Validation, and Analysis of migration-related risks. Working on novel interpretable & efficient fact-checking system.
- Aug **ROI Hunter**, *Company contract*
- 2018–Jan 2020 Automatic product classification and detection of attributes from product descriptions. These are used to enhance product advertisements.

Awards & Achievements

- 2025 Bronze Commemorative Medal of FIT BUT for excellent working results and performance of tasks at the institute
- 2024 Dean's Award for Ph.D. thesis
- 2022 Causal triplet extraction at CASE@EMNLP 2022 – **2nd place**
- 2020 EfficientQA competition at NeurIPS2020 (track <6GiB) – **3rd place**
- 2020 Counterfactual Reasoning at SemEval-2020 (task B) – **1st place**
- 2020 Counterfactual Reasoning at SemEval-2020 (task A) – **2nd place**
- 2019 RumourEval at SemEval-2019 – **2nd place**
- 2015 Deans Award for B.Sc. thesis

Theses Supervision

Master's Theses

- 2025 Lucia Makaiová – Monolingual Adaptation of Multilingual Language Models through Vocabulary Alignment
- 2025 Jakub Ryšánek – Discovering Morphemes and the Structure of Emergent Language Across Tasks on Real-World Data
- 2024 Antonín Jarolím – Document Retrieval with Fine-grained Relevance Cues
- 2023 Jan Kočí – Automated Truth Discovery
- 2023 Daniel Kamenický – Designing a Multilingual Fact-Checking Dataset from Existing Question-Answering Data
- 2021 Michal Slávka – Multilingual Open-Domain Question Answering

Bachelor's Theses

- 2024 Jakub Štetina – Efficient Multi-Vector Document Retrieval with Adaptive Representation Size
- 2021 Pavel Kocurek – Visual Question Answering
- 2020 Ksenia Bolshakova – Stylized Natural Language Generation in Dialogue Systems
- 2020 Jozef Karabelly – Non-Supervised Sentiment Analysis
- 2019 Alžbeta Štajerová – Automated Detection of Hate Speech and Offensive Language
- 2019 Tomáš Daniš – Machine Comprehension Using Commonsense Knowledge
- 2019 Jan Kočí – Recommender System for Web Articles

Teaching

2023–Present Information Retrieval (PV211) at Masaryk University

Master's Courses

2019–Present Natural Language Processing (ZPJ)a)

2019–2024 Artificial Intelligence and Machine Learning (SUI)

Bachelor's Courses

2017–2021 Practical Aspects of Software Design (IVS)

2017–Present Scripting Languages (ISJ)

Summer Schools

2019–Present NLP lectures at Summer Schools BISSIT

Skills

Communication My love for speaking before audiences sprouted during summers while at the university (2013–2014), I worked at the Museum of Coins and Medals in Kremnica, Slovakia. I guided local and foreign tourist groups and helped with the organization of special events at the museum.

Hobbies Music (drums/harmonica), Scifi/Fantasy Reading, Amateur astronomer, Gardening, Hiking, Running, Swimming, Skateboarding, Skiing, Cycling, Volleyball, Snorkelling