

Mubashara Akhtar

 mubasharaak |  mubashara-akhtar |  akhtarmubashara |  mubasharaakhtar.com
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SCIENTIFIC INTERESTS

automated fact-checking, multimodal reasoning, benchmarking & LLM evaluation, information retrieval, language modeling, in-context learning, numerical reasoning with LLMs

EDUCATION

PhD in Natural Language Processing, King's College London since Oct 2020

- Advisor: [Prof. Elena Simperl](#), [Dr. Oana Cocarascu](#)
- Topic: Multimodal Evidence Integration for Robust Automated Fact-Checking
- Expected thesis submission: June 2024

Visiting PhD student, University of Cambridge Jan - June 2023

- Host: [Prof. Andreas Vlachos](#)
- Visiting the [NLP research group](#)
- Project on LLM-based evaluation of information retrieved for automated fact-checking

BSc & MSc in Computer Science, TU Wien Oct 2011 - Jan 2020

- Minor in business
- Grade Master's Degree: 1.6 (comparable to UK first)
- Grade Bachelor Degree: 2.1 (comparable to UK 2.1)
- Thesis: Evaluation of User Interaction in the Telecommunication Industry

PUBLICATIONS

ChartCheck: An Evidence-Based Fact-Checking Dataset over Real-World Chart Images.

Mubashara Akhtar, Nikesh Subedi, Vivek Gupta, Sahar Tahmasebi, Oana Cocarascu, Elena Simperl. CoRR abs/2311.07453.

Exploring the Numerical Reasoning Capabilities of Language Models: A Comprehensive Analysis on Tabular Data.

Mubashara Akhtar, Abhilash Shankarampeta, Vivek Gupta, Arpit Patil, Oana Cocarascu, Elena Simperl.

To Appear in Findings of Annual Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2023.

Multimodal Automated Fact-Checking: A Survey.

Mubashara Akhtar, Zhijiang Guo, Michael Schlichtkrull, Oana Cocarascu, Elena Simperl, Andreas Vlachos.

To Appear in Findings of Annual Conference on Empirical Methods in Natural Language Processing (**EMNLP**), 2023.

Reading and Reasoning over Chart Images for Evidence-based Automated Fact-Checking.

Mubashara Akhtar, Oana Cocarascu, Elena Simperl.

Findings of Annual Conference of the European Chapter of the Association for Computational Linguistics (**EACL**), 2023.

PubHealthTab: A Public Health Table-based Dataset for Evidence-based Fact Checking.

Mubashara Akhtar, Oana Cocarascu, Elena Simperl.

Findings of Annual Conference of the North American Chapter of the Association for Computational Linguistics (**NAACL**), 2022.

The Potential of Chatbots: Analysis of Chatbot Conversations.

Mubashara Akhtar, Julia Neidhardt, Hannes Werthner.

IEEE Conference on Business Informatics 2019 (CBI).

WORK EXPERIENCE

Student Researcher, Google Deepmind July - Nov 2023

– Host: [Julian Eisenschlos](#)

– Project on open-domain question answering with text, tables, and semi-structured data

Teaching Assistant, King's College London Sept 2021 - Dec 2022

– Course: Python programming for data scientists

– Responsibilities: coursework co-design, lab supervision, marking of programming projects

Data Scientist, Mayato AT (Darmstadt, Germany) Jan 2019 - Sept 2020

– German smart speaker project for Europe's largest telecom provider, **Deutsche Telekom AG**

– Language model development for recognising users' intents given interactions with the smart speaker

– Technologies: Python (PyTorch, transformers, scikit-learn, nltk, etc.), MS LUIS, Git, etc.

Java Software Engineer, Ebcont GmbH (Vienna, Austria) Oct 2017 - Dec 2018

– Developed a fraud detection tool for Austrian Ministry of Finance

– Technologies: Java, Openshift, Microservices, Camunda, Spring Boot, Maven, Hibernate

Research Assistant, TU Wien (Vienna, Austria) Feb - Dec 2017

– Machine learning project in cooperation with telecom company, T-Mobile Austria

– Researched on user modelling and clickstream prediction; reported to head of data lab at T-Mobile

Statistics Consultant, UNIDO (Vienna, Austria) Sept - Dec 2015

– Analysed trends in the manufacturing industry in MENA countries

– Reported to chief statistician at the United Nations Industrial Development Organisation (UNIDO)

Teaching Assistant, TU Wien (Vienna, Austria) Mar - July 2014

– Institute of Computer Graphics & Algorithms; Institute of Statistics & Math. Methods in Economics

– Teaching groups of 20 students; prepared and reviewed math and programming assignments/labs

SERVICE & SCIENTIFIC EXPERIENCE

Responsible AI committee, [The Croissant Format](#) since August 2023

Organization committee [FEVER workshop](#), co-located with [EACL '23](#), [EMNLP '24](#) since Oct 2022

Organisation [King's College London KG Lab's](#) weekly seminar group Dec 2020 - Dec 2022

Teaching Assistant, [Oxford Machine Learning Summer School](#) July 2021

Organization Women in ML (WiML) Workshop at NeurIPS 2020 Dec 2020

ACM Summer School on Recommender Systems Aug 2017

SUPERVISION

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| Evie Stergiopoulou, King's Undergraduate Research Fellowship | since July 2023 |
| Anmol Dadlani, Master's thesis, King's College London | Feb - Aug 2023 |
| Francesco Torregrossa, Master's thesis, King's College London | Feb - Aug 2023 |
| Wen Ting Choi, Master's thesis, King's College London | Feb - Aug 2023 |

GRANTS & AWARDS

- Research Impact Award, King's College London NMES PhD competition, 2023
- King's College London NMES Faculty Studentship, 2020-2024
- [European Forum Alpbach](#) scholarship for the years 2020/21 (5% acceptance rate), 2020
- US Embassy of Austria's Austria to Austin Entrepreneurship program, 2019
- [Ban Ki-moon Center for Global Citizens](#) mentorship (mentored by TU Wien vice-rector), 2019
- Research scholarship from TU Wien for master's thesis, 2017
- ACM RecSys summer school and conference grant from TU Wien, 2017
- Merit-based scholarship from TU Wien, 2012-2016
- Top 1% with 1.0 grade at Austrian high school final exam (summa cum laude)

EXTRA-CURRICULAR

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| President, Club Alpbach London | since Oct 2022 |
| Board member, Club Alpbach Vienna | Oct 2020 - Sept 2022 |
| Scouts leader and board member, Scouts in Austria | since 2013 |

QUALIFICATIONS & SKILLS

Technical Competences

- Programming (expert): Python (PyTorch, Huggingface transformers, spaCy, scikit-learn, etc.), R, Java (Hibernate, Maven, Spring Boot, Mockito, Elasticsearch, JSF, etc.)
- Programming (experience): C#, JavaScript, HTML
- Other: AWS, OpenShift Cloud, Git, PostgreSQL, MongoDB, Amazon Mechanical Turk, Scrum

Languages: native in German and Urdu; fluent in English; advanced in Latin; beginner in French

REFERENCES

| | |
|---|-----------------------------------|
| Prof. Elena Simperl & Dr. Oana Cocarascu, King's College London | Supervisor |
| Prof. Andreas Vlachos, University of Cambridge | Collaborator, research visit host |
| Dr. Michael Schlichtkrull, University of Cambridge | Collaborator |
| Dr. Zhijiang Guo, Huawei Noah's Ark Lab | Collaborator |
| Dr. Vivek Gupta, University of Pennsylvania | Collaborator |
| Julian Eisenschlos, Google Deepmind | Internship host |