

Area of Expertise	Databases, Big Data processing, data integration, query optimization, Semantic Web (OWL, RDF, RDFS, SPARQL), knowledge engineering, graph databases (neo4j, stardog, Amazon Neptune, GraphDB, Virtuoso)
Skills	Java, Python, SQL, SQLite, SPARQL, Graph Analytics, ETL, Weka, RapidMiner, Tableau, BPMN, Cloud Services (AWS), Web development (Java Spring and Vaadin Framework)

Work Experience

09/2020 — Current. Expected graduation April 2024.	PhD Fellow , Dept. of Computer Science, Aalborg University, Denmark I work in Data, Knowledge, and Web Engineering (DKW) research group. My PhD research focuses on optimizing queries, extracting schemas, and improving the quality of large knowledge graphs. I have developed efficient algorithms to make querying these graphs faster, proposed scalable methods for extracting their underlying structures, and created systems to enhance their overall quality and interoperability. My work has been recognized and published in well-respected conferences such as VLDB, SIGMOD, TheWebConf, and EDBT.
10/2019 — 08/2020	Scientific Research Assistant , Dept. of Computer Science, Aalborg University, Denmark As a scientific research assistant, my responsibilities included managing R&D projects, maintaining and improving existing features, conducting surveys on query optimization in graphs, and writing research reports. I ensured smooth project progress, made necessary enhancements, and conducted comprehensive research to stay updated with the latest advancements. I also played a key role in documenting our findings through detailed research reports.
06/2018 — 10/2018	Data Engineer (Intern) , everis NTT Data Company, Barcelona, Spain Everis NTT DATA Company is dedicated to consulting and outsourcing in all sectors. I was working in a Semantic Business Unit (SEMBU) in EU-CORDIS linked open data project. My major responsibilities were modeling ontologies, designing a scalable architecture, and proposing an end-to-end solution for EU-CORDIS research projects.
01/2016 — 09/2017	Software Engineer , eConceptions pvt Ltd, Islamabad, Pakistan eConceptions deals in VAS (Value Added Services) including SMS, IVR and Mobile Apps. I was responsible for developing and maintaining SMS Services and Mobile Applications. Major responsibilities were to provide back-end services for mobile applications and meeting requirements from telecom operators on regular basis.
08/2015 — 09/2015	Web Developer (Intern) , Solution Providers(eSolPro) pvt Ltd, Islamabad, Pakistan I had been working on web related ongoing projects, e.g., designing, deploying, and maintaining web applications for clients.

Education

01/09/2017 — 31/08/2019	Masters in Big Data Management and Analytics (Computer Science) , TU-Berlin, Germany Thesis: 'Supporting the Semi-Automatic Creation of Schema in Data Integration Systems' Final Grade: 1,4 (Sehr gut/very good)
01/02/2013 — 31/01/2017	Bachelors in Computer Science , COMSATS University, Islamabad, Pakistan Final Grade: 3.84/4.00 CGPA (Campus Gold Medal & Institute Silver Medal)

Teaching & Supervision

Fall 2021 & Fall 2022 BSc Course	Teaching Assistant , Database Management System course for BSc in Software Engineering at Aalborg University Responsibilities: Database design and querying exercise sessions
Fall 2021, 2022, 2023 BSc Project	Group Supervisor , Knowledge Engineering Toolbox for BSc in Software Engineering at Aalborg University I have supervised groups working in medical domain for knowledge engineering. Specifically, with MIMIC healthcare dataset, aiming to design a common general purpose ontology using existing common data models like OMOP, SCDM, and PCORnet.
Spring 2021 BSc Project	Group Supervisor , Analyzing large scale ships AIS data final semester project for BSc in Software Engineering at Aalborg University I have supervised groups working with large scale ships AIS data aiming to create a system to improve existing navigation and illegal fishing.

Achievements

Grants	PhD Study Abroad Travel Grants 2023 I was awarded travel grants by Otto Mønsted and Danish Data Science Academy for study abroad during my PhD studies.
Award	Big Data Talent Awards 2019 (Runner-up) I was selected as a runner-up for Big Data Talent Awards 2019 at UPC Barcelona, Spain, for my master thesis.
Scholarship	Erasmus Mundus Scholarship I was awarded a fully funded scholarship for my master's degree in Big Data Management and Analytics.
Medals	Gold and Silver Medals I won a campus Gold Medal award and an institute Silver Medal award at COMSATS University Islamabad, Pakistan, for the highest CGPA: 3.84/4.00 (Batch Spring 2013-17) of my Bachelor's degree.

Others

External Reviewer	ISWC'22, VLDB'22, SIGMOD'22, SIGMOD'23
Languages	English (C1), Danish (PD-3)

Publications

2023	[1] 'SHACTOR: Improving the Quality of Large-Scale Knowledge Graphs with Validating Shapes', Kashif Rabbani , Matteo Lissandrini, and Katja Hose, <i>In Proceedings of the 2023 International Conference on Management of Data, (SIGMOD-Companion '23) June 18-23, 2023, Seattle, WA, USA.</i> https://dl.acm.org/doi/10.1145/3555041.3589723
2023	[2] 'Extraction of Validating Shapes from very large Knowledge Graphs', Kashif Rabbani , Matteo Lissandrini, and Katja Hose, <i>In Proceedings of the Very Large Databases 2023 (Volume 16 Issue 5, VLDB-2023) August 2023, Vancouver Canada.</i> https://www.vldb.org/pvldb/vol16/p1023-rabbani.pdf
2023	[3] 'Incremental Schema Integration for Data Wrangling via Knowledge Graphs', Javier Flores Kashif Rabbani , Sergi Nadal, Cristina Gómez, Oscar Romero, Emmanuel Jamin, and Stamatia Dasiopoulou, <i>In Semantic Web Journal 2023.</i> https://www.semantic-web-journal.net/system/files/swj3347.pdf
2022	[4] 'SHACL and ShEx in the Wild: A Community Survey on Validating Shapes Generation and Adoption', Kashif Rabbani , Matteo Lissandrini, and Katja Hose, <i>In Companion Proceedings of the Web Conference (WWW), 2022.</i> https://dl.acm.org/doi/10.1145/3487553.3524253
2021	[5] 'Optimizing SPARQL Queries using Shape Statistics', Kashif Rabbani , Matteo Lissandrini, and Katja Hose, <i>In Proceedings of the 24th International Conference on Extending Database Technology. (EDBT), 2021.</i> https://openproceedings.org/2021/conf/edbt/p202.pdf
2019	[6] 'ODIN: A dataspace management system', Nadal Francesch Sergi, Kashif Rabbani , Óscar Romero Moral, and Shumet Tadesse Nigatu, <i>In Proceedings of the ISWC 2019 Satellite Tracks (Posters & Demonstrations, Industry, and Outrageous Ideas) co-located with 18th International Semantic Web Conference (ISWC), 2019.</i> https://ceur-ws.org/Vol-2456/paper48.pdf
2019	[7] 'ARDI: Automatic Generation of RDFS Models from Heterogeneous Data Sources', Shumet Tadesse, Cristina Gómez, Oscar Romero, Katja Hose, Kashif Rabbani , <i>In IEEE 23rd International Enterprise Distributed Object Computing Conference (EDOC), 2019.</i> https://ieeexplore.ieee.org/document/8945018