# Sarah Shoilee

Knowledge Graph and use of Graph Embedding Techniques.

#### Contact

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• The Netherlands



Education

Summary

2021–going **PhD** in Computer Science Vrije Universiteit Amsterdam, Amsterdam, the Netherlands Project: Pressing Matter – Ownership, Value and the Question of Colonial Heritage in Museums

Sarah is a Computer Science Ph.D. candidate at Vrije Universiteit Amsterdam, where she is investigating

the use of latest machine learning and semantic web technologies for Knowledge Discovery in Colonial

Heritage Objects Database. With a Masters in Artificial Intelligence from Katholieke Universiteit Leuven and solid background in Computer Science, her current research interest includes Digital Humanities,

- Promoter. Prof. Dr. Jacco van Ossenbruggen & Prof. Dr. Susan Legêne
- Co-promoter: Dr. Victor De Boer
- 2018–2020 **Advanced Masters** in Artificial Intelligence Katholieke Universiteit Leuven, Leuven, Belgium Specialization: Big Data Analytics
  - Thesis: Knowledge Discovery on Spreadsheet using Semantic Information
  - Thesis Supervisor: Prof. Dr. Luc De Raedt
  - 2016–2017 **Masters** on Computer Science and Engineering North South University, Dhaka, Bangladesh Summa Cum Laude
  - 2012–2016 **Bachelor** Computer Science and Engineering North South University, Dhaka, Bangladesh Summa Cum Fructu

## Summer School

July'22	International Semantic Web Research Summer School	Bertinoro International Center for
	Informatics, Bertinoro, Italy	

May'18 Research Methods and Approaches to Text Entry and Other Interaction Techniques IIT Bombay, Mumbai, India

## **Pre-PhD Research Experience (Interdisciplinary)**

- **UX Research Trainee (Feb-Jun) Project:** Development of an inspiring and explainable digital platform to offer improvement and maintainability of a healthy lifestyle with help of AI (collaboration with TNO) Supervisor: Dr. Emmanuelle Beauxis Aussalet & AbdelRahman Hassan
  - Designed web interface that explains the AI health recommendations to make it more actionable for the end user (co-creation)
  - Designed, conducted and analysed 3 user studies to understand acceptability and satisfiability of the proposed system.

#### **Research Assistant**

North South University, Dhaka, Bangladesh

**Project:** Gender Research under Google's Next Billion Users Initiative Supervisor: Dr. Nova Ahmed & Dr. Nithya Sambasivan

- Conducted 8 focused group interviews, leading 3 of them
- Projected solution through qualitative analysis which has the potential to increase google product usage by 10% among tech-users from Bangladesh

**Project:** Mobile Application for Breast Cancer Awareness *Supervisor: Dr. Nova Ahmed* 

- Designed user interface which increased user satisfaction raising by 60%
- Performed user acceptance feasibility study that looked at sustainable solution from a cost, quality and technological perspective.

#### Programming

Python advanced C/C++ Java advanced SPAQL R intermediate LaTex intermediate

### **Research Interest**

🔶 Linked Open Data

Entity Linking

Knowledge Modelling

Knowledge Discovery

Digital Humanities

2017-2018

2020

#### Languages

Bengali Native English Proficient Hindi Independent Dutch Basic

## Publication

**Shoilee, S.B.A.**, de Boer, V., van Ossenbruggen, J. (2024). A Framework for Evaluating Entity Alignment Impact on Downstream Knowledge Discovery. 24th International Conference on Knowledge Engineering and Knowledge Managemen (EKAW 2024). Just Accepted (September 2024).

de Boer, V. and **Shoilee, S.B.A.** (2024). Linked Open Data for Cultural Heritage. The Palgrave Encyclopedia of Cultural Heritage and Conflict. Just Accepted (Sep 2024).

Sartini, B., **Shoilee, S.B.A.**, Libbi, C. A., de Boer, V. 2024. Multivocal Exhibition: Exploring Cultural Perspectives through User-Curated Art Exhibitions. J. Comput. Cult. Herit. Just Accepted (July 2024). https://doi.org/10.1145/3679020

**Shoilee, S.B.A.**, de Boer, V., van Ossenbruggen, J. (2023). Polyvocal knowledge modelling for ethnographic heritage object provenance. In: Knowledge Graphs: Semantics, Machine Learning, and Languages vol. 56, pp. 127–143. IOS Press, Leipzig,Germany.

**Shoilee, S. B. A.** (2022). "Knowledge Discovery for Provenance Research on Colonial Heritage Objects". In Proceedings of the Doctoral Consortium at ISWC 2022 co-located with 21st International Semantic Web Conference (ISWC 2022). Hangzhou, China. Hartig, O. & Seneviratne, O. (eds.). CEUR-WS.org, 10 p. (CEUR Workshop Proceedings; vol. 3165).

Islam, F., **Shoilee, S. B. A.**, Shams, M., Rahman, R (2017)."Potential Risk Factor Analysis and Risk Prediction System for Stroke Using Fuzzy Logic".In:*Artificial Intelligence Trends in Intelligent Systems. CSOC2017. Advances in Intelligent Systems and Computing.* Vol.573.Springer,Cham, pp.262–272.

Reza, T., **Shoilee, S.B.A.**, Akhand, S.M., Khan, M, M (2017)."Development of android based pulse monitoring system". In: *Proceedings of the 2017 Second IEEE International Conferenceon Electrical, Computer and Communication Technologies (icecct2017)*. Tamil Nadu, India: IEEE, pp.1428–1434.

Ahmed, N., Iftekhar, L., Ahmed, S., Rahman, R., Reza, T., **Shoilee, S.B.A.**, and Choudhury, C. F. (2015). "Bap re Bap!: Driving Experiences through Multimodal Unruly Traffic on Bumpy Roads". *In Proceedings of the 2015 Annual Symposium on Computing for Development (DEV '15)*. ACM, New York, NY, USA, pp. 63-64.

#### **Conference Participation**

Sep'24	SEMANTICS Conference 2024	Amsterdam, the Netherlands
Jun'24	Digital Humanities BeNeLux 2024	Leuven, Belgium
Sep'23	SEMANTICS Conference 2023	Leipzig, Germany
Oct'22	The 21st International Semantic Web Conference (ISWC 2022)	virtual, Hangzhou, China
Jul'22	Digital Humanities 2022 (DH 2022)	virtual, Tokjo, Japan
Sep'21	SEMANTICS Conference 2021	Amsterdam, the Netherlands
Feb'17	Second IEEE International Conference on Electrical, Computer an gies (ICECCT 2017) SVS College of Engineerin	nd Communication Technolo- g, Coimbatore, Tamil Nadu, India