

# TEK RAJ CHHETRI

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## SUMMARY

Computer scientist specializing in the design and implementation of algorithms and tools to address real-world challenges and drive scientific discovery. Developed GDPR-compliant frameworks for secure IoT data sharing and edge-intelligence architectures that enhance AI explainability through knowledge graphs (KGs). Currently leading BrainKB—a large-scale neuroscience KG infrastructure—and the development of LLM-based multi-agent systems for knowledge extraction and representation.

## SELECTED EXPERIENCE

Postdoctoral Associate **Massachusetts Institute of Technology (MIT)** 📅 2024 – current 📍 Cambridge, MA, USA

Research Fellow **University of Southampton (UoS)** 📅 2023 – 2024 📍 University Rd, Southampton, UK

Researcher **University of Innsbruck (UIBK)** 📅 2023 – 2023 📍 Innsbruck, Austria

Software Developer (Autonomous Shuttle - Urban Scenario) **Auve Tech** 📅 2020 📍 Tallinn, Estonia

## INNOVATIONS

- **Automated GDPR Compliance Verification Tool (or Automatic Contracting Tool in project)** (EU Innovation Radar) – Developed as part of my doctoral research and the *smashHit* project; selected as a key innovation and now being commercialized.

## PUBLICATIONS

### 📖 Books

- T. R. Chhetri, *Improving Decision Making Using Semantic Web Technologies*, 1st ed. Springer Vieweg Wiesbaden, Apr. 2025, pp. XXXIII, 275, ISBN: 978-3-658-45876-8. [Online]. Available: <https://link.springer.com/book/9783658458768>.

### 📄 Journal Articles

- T. R. Chhetri, A. Hohenegger, A. Fensel, M. A. Kasali, and A. A. Adekunle, "Towards improving prediction accuracy and user-level explainability using deep learning and knowledge graphs: A study on cassava disease," *Expert Systems with Applications*, vol. 233, p. 120955, 2023, ISSN: 0957-4174. DOI: <https://doi.org/10.1016/j.eswa.2023.120955>.
- T. R. Chhetri, A. Kurteva, R. J. DeLong, R. Hilscher, K. Korte, and A. Fensel, "Data Protection by Design Tool for Automated GDPR Compliance Verification Based on Semantically Modeled Informed Consent," *Sensors*, vol. 22, no. 7, 2022, ISSN: 1424-8220. DOI: [10.3390/s22072763](https://doi.org/10.3390/s22072763).

### 👥 Conference Proceedings

- N. Mihindukulasooriya, S. Tiwari, D. Dobriy, F. Nielsen Årup, and T. R. Chhetri, "Scholarly Wikidata: Population and Exploration of Conference Data in Wikidata using Large Language Models and Semantic Web Techniques. EKAW-24," 2024.

## EDUCATION

Ph.D. in Computer Science **University of Innsbruck (UIBK)** 📅 2020 – 2023

M.Sc. in Computer Science **University of Tartu (UT)** 📅 2018 – 2020

B.Tech. in Computer Science & Engineering **Jawaharlal Nehru Technological University Kakinada (JNTUK)** 📅 2011 – 2015

## AWARDS & HONORS

- **Doctoral Dissertation Distinction, University of Innsbruck Doctoral Examination Committee** (Grade: "Excellent") – Awarded in recognition of scholarly merit, significant contributions, and the potential impact of the doctoral research on the advancement of the field.
- **Corporate Fellowship, Tiroler Sparkasse (€2 300)** – Awarded in recognition of innovative ideas with local impact, facilitating participation in the *IECT-Hermann Hauser Summer School on Entrepreneurship*.
- **MFA Scholarship, Estonian Ministry of Foreign Affairs (€8 000)** – Awarded (2018–2020) to 18 recipients (1–2 per department) for master's studies at the
- **Full Tuition Waiver Scholarship** – Granted (2018–2020) for master's degree studies at the *University of Tartu, Tartu, Estonia*.

## SELECTED LEADERSHIP & LEADERSHIP SERVICE

- **Editorial Roles:** General Chair AI4S-2024 and Special Issue Guest Editorial Board Member *Semantic Web Journal* 2023.
- **Program Committees:** Second Retrieval-Augmented Generation Enabled by Knowledge Graphs – ISWC 2025 and LLM-TEXT2KG 2025.
- **Reviewer:** *Semantic Web, Expert Systems With Applications, Computing, IEEE Access* and *Computer Communications*.
- **Advisory Board Member:** SWARM (Sentient Wisdom and Artificial Reasoning Machines).

## TEACHING & SUPERVISION

- **Teaching:** KGSWC Winter School (2023, 2024), PS Computer Network & Internet Technology and PS Parallel Programming (2020–2023).
- Bachelor (1 at UIBK, 3 at CAIR-Nepal (ongoing)), Master (2 at UIBK, 2 at CAIR-Nepal).