Sushil Awale

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Summary

Research on multimodal information retrieval for scientific, technical and cultural domains, building search systems with vision-language models for patents and cultural heritage collections.

Experience

Universität Marburg, Research Associate, Multimodal Modelling and Machine Learning (M3L) — Marburg, Germany — Dec 2025 – present — 1 year

TIB – Leibniz Information Centre for Science and Technology, Research Associate, Visual Analytics Research Group — Hannover, Germany — Apr 2023 – present — 3 years 8 months
Multimodal information retrieval for patents and cultural heritage collections with vision-language models.

Language Technology Group, Universität Hamburg, Student Assistant — Hamburg, Germany — Jan 2022 – Mar 2023 — 1 year 2 months
Built an intelligent scholarly system powered by natural language processing.

Education

PhD **Leibniz Universität Hannover**, Computer Science — Hannover, Germany — Apr 2023 – present
- Supervisor: Prof. Dr. Ralph Ewerth

M.Sc. **Universität Hamburg**, Intelligent Adaptive Systems — Hamburg, Germany — 2023

B.Sc. **Tribhuvan University**, Computer Science and Information Technology — Kathmandu, Nepal — 2020

Publications

Examining Gender and Racial Bias in Vision-language Models within Colonial Contexts — 2026
Sushil Awale, Omkar Gavali, Ratan Sebastian, Christoph Rippe, Anett Hoppe, Thomas Risse, Ralph Ewerth
10.1145/3795513.3807441 (ACM Web Science Conference Companion, WebSci 2026, Braunschweig, Germany, May 26-29, 2026)

Exploring Patents Visually: An Interactive Search System for Multimodal Patent Image Search and Interpretation — 2025
Sushil Awale, Eric Müller-Budack, Rahim Delaviz, Ralph Ewerth
ceur-ws.org/Vol-4062/paper8.pdf (Patent Text Mining and Semantic Technologies co-located with the ACM SIGIR Conference on Research and Development in Information Retrieval, PatentSemTech@SIGIR 2025, Padua, Italy, July 17, 2025)

Patent Figure Classification Using Large Vision-Language Models — 2025
Sushil Awale, Eric Müller-Budack, Ralph Ewerth
10.1007/978-3-031-88711-6_2 (European Conference on Information Retrieval, ECIR 2025, Lucca, Italy, April 6-11, 2025)

DBLP-QuAD: A Question Answering Dataset over the DBLP Scholarly Knowledge Graph 2023
Debayan Banerjee, **Sushil Awale**, Ricardo Usbeck, Chris Biemann
ceur-ws.org/Vol-3617/paper-05.pdf (Workshop on Bibliometric-enhanced Information Retrieval co-located with the European Conference on Information Retrieval, BIR@ECIR 2023, Dublin, Ireland, April 2, 2023)

The Scholarly QALD Challenge 2023
Debayan Banerjee, Mohamad Yaser Jaradeh, **Sushil Awale**, Nandana Mihindukulasooriya, Sören Auer, Ricardo Usbeck
(International Semantic Web Conference)

ARDIAS: AI-Enhanced Research Management, Discovery, and Advisory System 2023
Debayan Banerjee, Seid Muhie Yimam, **Sushil Awale**, Chris Biemann
ceur-ws.org/Vol-3656/paper4.pdf (Workshop on Scientific Document Understanding co-located with the AAAI Conference on Artificial Intelligence, SDU@AAAI 2023, Virtual Event, February 14, 2023)

Enriching Hindi WordNet Using Knowledge Graph Completion Approach 2022
Sushil Awale, Abhik Jana
aclanthology.org/2022.eurali-1.13 (Workshop on Resources and Technologies for Indigenous, Endangered and Lesser-resourced Languages in Eurasia co-located with the Language Resources and Evaluation Conference, EURASIA@LREC 2022, Marseille, France, June 20, 2022)

Preprocessing of Nepali News Corpus for Downstream Tasks 2022
Sushil Awale, Suraj Prasai, Birodh Rijal, Santa B. Basnet
10.3126/nl.v35i01.46553 (Nepalese Linguistics)

Awards

Best Poster Paper Award May 2026
ACM Web Science Conference 2026. For "Examining Gender and Racial Bias in Vision-language Models within Colonial Contexts".

Projects

CARA 2026
Cluster-assisted relevance assessment tool for building image retrieval test collections.

Tutorial: Fusing Vision and Language (KONVENS 2025) Sept 2025
Full-day hands-on tutorial on vision-language models for multimodal content analysis, with Eric Müller-Budack, Hildesheim, Germany.

iPatent 2025
Interactive multimodal patent image search and interpretation system, with a live demo hosted by TIB.

Patent Figure Classification 2025
Code and the PatFigCLS / PatFigVQA datasets for patent figure classification with vision-language models.

DBLP-QuAD 2023
Scholarly question answering dataset of 10,000 questions with SPARQL queries over the DBLP knowledge graph.

Languages

Spoken: English, Nepali, Newari, Hindi, German

Interests

Hobbies: Football, Cycling, Cooking