Sulaeman Aloradi

Home address: Am Jesuitenhof 3, 53117, Bonn, Germany | **Place of birth**: Jeddah, Saudi Arabia | **Date of Birth:** 22/09/1999
Nationality: Jordanian | **LinkedIn:** https://www.linkedin.com/in/sulaeman-aloradi-3927a5212/ | **Email:** snedal99@gmail.com
Phone: (+49) 15754221331 | **Portfolio:** https://sulaiman-nedal.github.io/Portfolio/ | **GitHub:** https://github.com/Sulaiman-Nedal
Caisa Lab Profile: https://caisa-lab.github.io/members/sulaeman.html

EDUCATION

[04/2023 – Current] **Master of Science in Computer Science**

Bonn University

City: Bonn | **Country:** Germany

[09/2018 – 06/2022] **Bachelor of Science in Computer science**

King Abdulaziz university

City: Jeddah | **Country:** Saudi Arabia | **Final grade:** 4.66 out of 5 (Excellent) |

Thesis: Recommendation System for Educational Material Quality Assessment

Projects

[Currently] **Project 1: Transformers Navigating Mazes with Multi-Step Prediction**

Caisa-Lab from Bonn-Aachen international Centre for Information Technology (b-it)

- Improved multi-step planning in transformer-based navigation agents using the MLM-U objective, enabling the model to predict multiple steps both forward and backward instead of only next-token (autoregressive) predictions—this enhanced long-term planning capabilities in maze tasks, outperforming standard transformers on complex layouts.
- Engineered a transformer implementation in Python with PyTorch and Hydra, allowing easy switching between next-token predictive mode ("AR") and the MLM-U training regime under the PAST (encoder-decoder) model architecture.
- Established comprehensive benchmarking scripts and datasets, including A* search traces for supervised comparison, leading to results showing MLM-U is four times more sample-efficient and converges twice as fast in GPU hours compared to next-token objectives.

Caisa Lab Personal Profile Link: https://caisa-lab.github.io/members/sulaeman.html

Link: https://github.com/Sulaiman-Nedal/KGAT

[01/2025–04/2025] **Project 2: Implementation of a Speak Function for Robot Communication**

Bonn University Project

- Engineered a natural language speak function for the RoboCup robot using Python, enabling extended conversational interactions by preventing repetitive short utterances and implementing robust validation checks.
- Integrated context-aware response generation to maintain dialogue coherence, improving the robot's ability to sustain long-form conversations.
- Designed a sanity check module to validate responses for relevance and logical consistency, reducing errors during human-robot interactions.
- Technologies: Python, ROS2 (Robot Operating System), NLP techniques, Large Language Models (LLMs).

Link: https://github.com/Sulaiman-Nedal/LLM-based-Communication-Agent-for-Human-Robot-Interaction

[08/2024 – 10/2024] **Project 3: Fine-grained Fact Verification with Kernel Graph Attention Network**

Bonn University Project

- Leveraged the KGAT model to classify scientific claims, achieving a 3% improvement (from 71% to 74%) in labeling accuracy, and a 1% improvement (from 69% to 70%) in FEVER Score. This was inspired by the research paper "Fine-grained Fact Verification with Kernel Graph Attention Network".
- Applied tokenization, stemming, and lemmatization using NLTK for model training.

  Used TF-IDF vectorization to enhance feature extraction.
- Trained using multiple classification models, including Logistic Regression, Naive Bayes, and SVM.

  Link: https://github.com/Sulaiman-Nedal/KGAT

[05/10/2024 – 30/10/2024] **Project 4: Text Summarization Tool with Extractive and Abstractive Methods**

Personal Project

- Deployed a web application for text summarization, employing both extractive and abstractive techniques to summarize texts.
- Leveraged NLTK for sentence and word tokenization, stop word removal, and stemming to prepare text data for summarization tasks.
- Utilized Scikit-learn for TF-IDF vectorization to identify features for extractive summarization.
- Enhanced extractive summarization with the TextRank algorithm (via NetworkX) and integrated tokenized data into the BART transformer model for abstractive summarization, producing coherent and concise summaries.

  Link: https://github.com/Sulaiman-Nedal/text-summarization-tool

SKILLS

- **Technical Skills:** Python (Pandas, NumPy, Scikit-learn, Matplotlib, Seaborn, NLTK), Java, SQL, Git, Github, Jupyter Notebooks, Google Colab. HPC Clusters.
- **Soft Skills:** Analytical thinking, problem-solving, adaptability, teamwork, enthusiasm for new technologies.
- **Language Skills:** English (Fluent), German (Beginner), Arabic (Native).