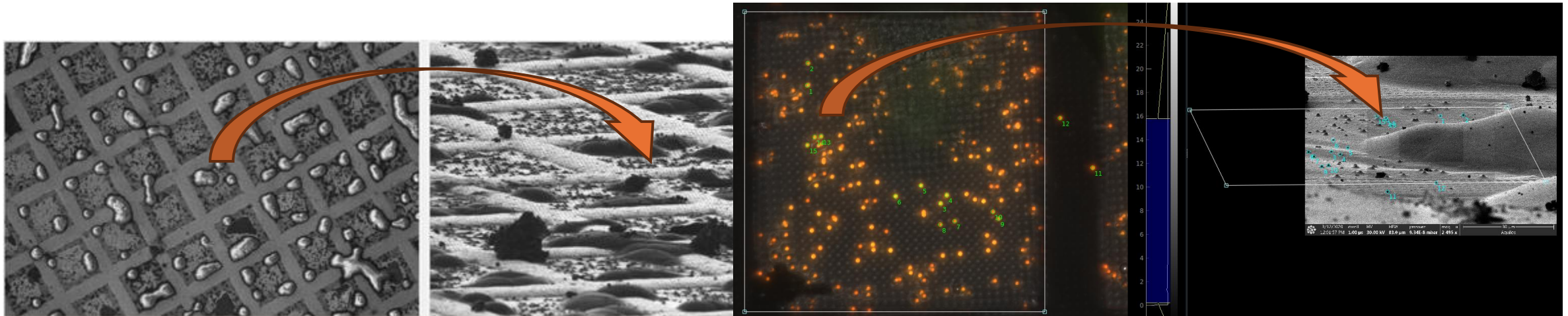


# Benchmarking and optimizing LVLMs to correlate light and electron microscopes

- The thesis should explore potentials to align light and electron microscopy
- A basic toolchain exists and data is plenty available
- Collaboration with CSSB
- Contact: Martin & Xintong



# Attitude Polarization Detection in Multilingual Text



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Made with ❤️ by the POLAR Team

- Check our Shared task for Attitude Polarization Detection in Multilingual Text: <https://polar-semeval.github.io/>
- Participate in the shared task
- Explore different text analysis approaches and classification models for polarization.
- Multilingual, cross-lingual approaches
- Contact: [seid.muhie.yimam@uni-hamburg.de](mailto:seid.muhie.yimam@uni-hamburg.de)

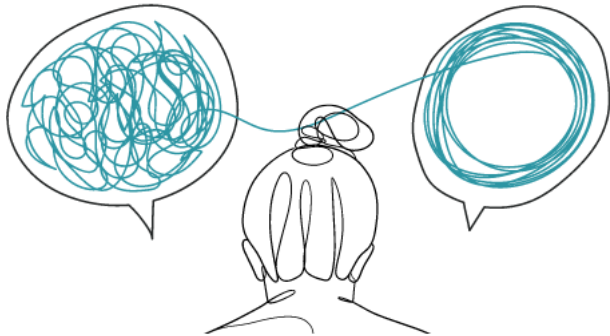
## POLAR @ SemEval 2026

Attitude Polarization Detection in Multilingual Text

# NLP for Mental Health – Low-Resource Setup

## INNOVETH

Innovative Health Intervention for  
Migrant Ethiopian Domestic Workers  
in the Middle East

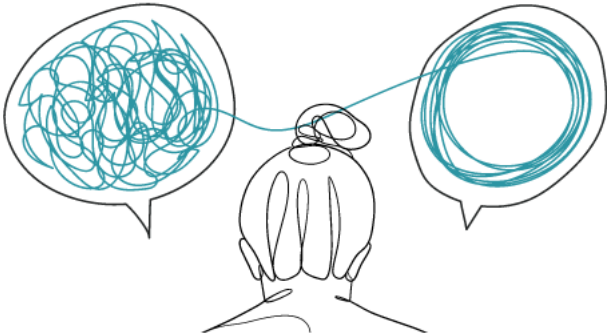


- Project: INNOVETH: Innovative Health Intervention for Ethiopian Migrant Domestic Workers in the Middle East
- NLP for mental health
  - Sentiment analysis
  - Emotion analysis
  - Social media text (chat and voice conversations)
- Doctor-in-the-loop approach
- Possible travel to Ethiopia or the Middle East
- Contact: [seid.muhie.yimam@uni-hamburg.de](mailto:seid.muhie.yimam@uni-hamburg.de)

# ASR for Mental Health – Low-Resource Setup

## INNOVETH

Innovative Health Intervention for  
Migrant Ethiopian Domestic Workers  
in the Middle East

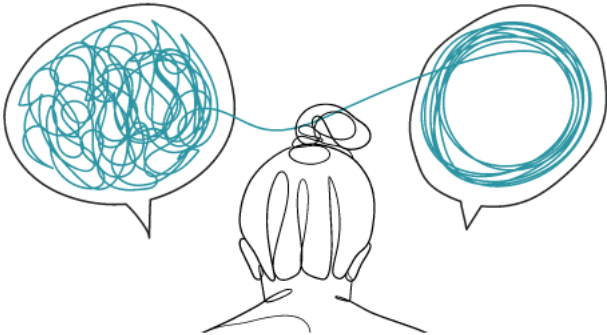


- Project: INNOVETH: Innovative Health Intervention for Ethiopian Migrant Domestic Workers in the Middle East
- ASR (Whisper, Kaldi,...)
  - Speech data collection
  - Finetuning for low-resource languages
  - App integration
- ASR for QA in the mental health domain
- Possible travel to Ethiopia or the Middle East
- Contact: [seid.muhie.yimam@uni-hamburg.de](mailto:seid.muhie.yimam@uni-hamburg.de)

# Chest X-Ray Analysis for Tuberculosis and Respiratory Disease Screening – Low-Resource Setup

## INNOVETH

Innovative Health Intervention for  
Migrant Ethiopian Domestic Workers  
in the Middle East



- Project: INNOVETH: Innovative Health Intervention for Ethiopian Migrant Domestic Workers in the Middle East
- Chest X-Ray Analysis for Tuberculosis
  - More than 300k data points available
  - Fine-tune from existing models
  - Evaluation (with expert annotation)
- Explainable AI and Deployment options
- Possible travel to Ethiopia or the Middle East
- Contact: [seid.muhie.yimam@uni-hamburg.de](mailto:seid.muhie.yimam@uni-hamburg.de)

# DATS – Test management in a LLM-driven world

- As a growing solution for corpus-oriented research, the requirements for reliability and reproducibility increase. Thus a proper test management concept needs to be developed and implemented.
- Critical research infrastructures also utilize LLMs; reproducibility and traceability of results is needed
- Within the thesis a concepts needs to be designed that specifically bridges the gap of traditional software tests and language models
- Contact: Robert, Fynn & Martin

# DATS – Conceptualizing UIs for Working with Documents and Underlying Embeddings, etc.

- Since the advent of compelling user experiences on our mobile devices, the requirements of users grow.
- Research software as expert system falls short in this area, especially for modern solutions for multimodal data that rely on embeddings.
- Goal of the thesis is to assess the state of the art for user experiences and derive a concepts for an enhanced user experience within DATS
- Contact: Tim & Martin



# OpenWebUI – Making waiting for LLMs more pleasant

- Literature review (ecommerce) on abandonment of requests – Pirate Metrics
- Review of waiting time mitigation strategies
- Create prototypes for study: fork OpenWebUI
- Study with A/B tests on user satisfaction (percieved waiting time etc.)
- Contact: Martin & Fynn

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# KIDHHS – Relevant topic extraction from German educational plans

- The educational plans (Bildungspläne) are varied in form and writing, so it is hard to quickly understand communalities and differences
- Derive core concepts and relations of the educational plans
- Implement a classifier that links social media postings to the concepts of the educational plans
- Stretch Goal: conceptualize a cross-federal state collection
- Contact: Rudy & Martin

# KIDHHS – German right-wing ideology classifier

- Develop a classifier for right wing topics and sentiments within social media
- Binary classifier, data already at hand
- Stretch goal: fine-grained classification types of talking points, focus on anti-semitism
- Contact: Rudy & Seid

# HiWi Announcements

# HiWi for KIDHHS

- A motivated student (m/f/d) with a strong interest in computational linguistics, research, and democracy.
- The project works in multiple angles: **text classification**: utilise Transformers and LLMs to classify the social media activity; **topic analysis**: analysis of the text to assign topics and present them in different ways; and **media/tools creation**: empower the users against anti-democratic and misinformation movements
- Fluency with Python programming language and excellent command of English. Good knowledge of web development, SQL/NoSQL, Docker, and the Linux environment. Eager to learn.