

Project Title

AI-Enabled Communication and Educational Support for Learners on the Autism Spectrum

Project Description: Advances in large language models (LLMs) offer new opportunities to support inclusive education and communication for learners on the autism spectrum. Educators and clinicians often rely on manually created social narratives and topic-specific communication supports to help learners understand social situations and participate in classroom activities. Creating and adapting these materials is time-intensive and challenging to personalize at scale. This project aims to explore how generative AI can assist in designing adaptive, user-centered educational and communication tools that are usable, ethical, and aligned with best practices in autism support.

Project Type: Research and Engineering

Internship Batch:

- **Batch 1:** May 10 to July 9, suitable for Education City students, i.e., CMUQ, TAMUQ and HBKU students

Duties/Activities:

- Conduct literature reviews on AI in education and autism support technologies
- Support the integration and testing of large language model components within prototype systems
- Develop and test prototype interfaces with a focus on accessibility and user-centered design
- Assist in the design of evaluation protocols and usability studies
- Document technical work and contribute to reports, presentations, or research outputs

Required Skills:

- Programming experience (preferably in Python), with familiarity in HTML, CSS, and JavaScript
- Experience with backend frameworks such as Flask or FastAPI
- Full-stack web or app development experience, including building interactive and responsive platforms
- Interest in or familiarity with large language models and AI-driven applications
- Arabic language knowledge (preferred but not required)

Preferred Intern Academic Level:

Undergraduate (Senior or 3rd year) in Computer Science/Engineering

Learning Opportunities:

- Gain hands-on experience working with generative AI technologies in real-world applications
- Develop skills in user-centered design and accessibility-focused development for inclusive technologies
- Explore ethical considerations and responsible AI practices when developing tools for neurodiverse populations
- Receive mentorship in interdisciplinary research and contribute to technical reports, presentations, or potential publications
- Potential for research publication or open-source contribution

Expected Team Size: *2-3 interns*

Mentors

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