



MEDICAL
UNIVERSITY
INNSBRUCK

Diploma Thesis Announcement

The promise of a digital twin in psychiatry

The Passecker Lab in collaboration with the University Clinic for Psychiatry I is seeking an enthusiastic Diploma Student who is interested in ***literature review on the promise of digital diagnostics for symptom detection with a focus on Schizophrenia.***

The Project:

This project aims to conduct a comprehensive literature review on the potential of digital phenotyping in capturing and monitoring symptoms associated with schizophrenia. By synthesizing existing research, we seek to shed light on the efficacy and applicability of digital phenotyping techniques in enhancing early detection, accurate diagnosis, and personalized treatment of these mental health conditions. The review will explore various digital tools and methodologies, including smartphone applications, wearable devices, and machine learning algorithms, that enable continuous monitoring of behavioral patterns, cognitive functioning, and social interactions. Through this investigation, we intend to identify gaps in current knowledge and propose future directions for research and clinical implementation.

Background & Environment:

We are looking for students in medicine, computer science, mathematics, psychology or a related subject. The ideal candidate should be highly motivated, creative, detail-oriented, and be interested in digital phenotyping for Psychiatry and with an interest in statistics and machine learning. The applicant can expect a multidisciplinary working atmosphere bridging clinical expertise with machine learning expertise. The applicant will get familiar with promising and modern techniques currently used or under development in cognitive and behavioural assessment of patients. The successful applicant will be supervised by Asst. Prof. Johannes Passecker and co-supervised by Kilian Lommer.

The Passecker lab studies the neuronal basis of Decision-Making and Reinforcement Learning in both health and disease. More information about the participating groups can be found <https://lab.jpassecker.com/>, the [Institute of Neurobiochemistry](#) or the [University Clinic for Psychiatry](#) of the Medical University Innsbruck, Austria

Applications for the above should be sent to johannes.passecker@i-med.ac.at and include a 1) full CV, 2) Motivation letter stating your interests, experience if any and career goals.

Starting Date: position is open until filled during 2023, starting date is negotiable.