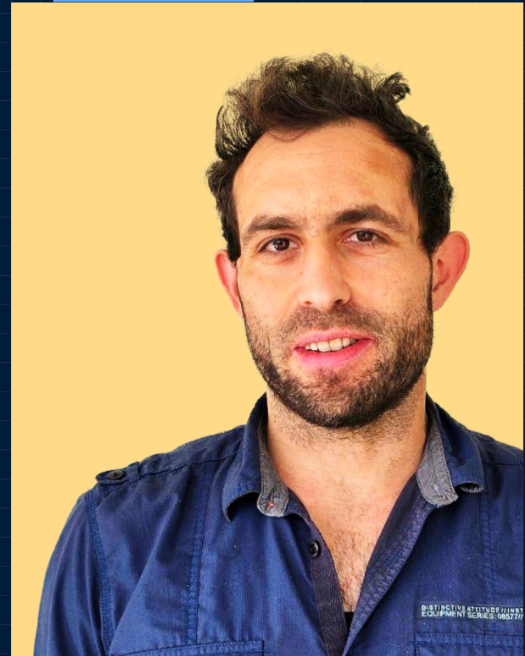


Yale SCHOOL OF MEDICINE
Biomedical Informatics and Data Science

Causal AI for Precision Medicine: From Single-Cells to Patient Satisfaction

We explore the potential of AI-driven precision medicine, emphasizing the shift toward causal modeling for personalized healthcare. Precision medicine aims to tailor treatments to individual genetic and phenotypic profiles based on complex biomedical data. While traditional statistics and machine learning research for precision medicine have been centered on identifying single associations in average-population-based studies, we present a counterfactual model that integrates causal reasoning and AI models to leverage data ranging from single-cell omics to clinical outcomes, providing a comprehensive tool for personalized decision support in precision medicine. We showcase practical applications in oncology, organ transplantation, and rheumatic diseases by creating algorithms and platforms for personalized treatment recommendations.

**research in
progress
rising star
seminars**



Manuel Schürch, PhD

Postdoctoral Researcher,
Quantitative Biomedicine,
University of Zurich &
Comprehensive Cancer
Center, University
Hospital Zurich

Thursday April 11, 2024 • 12 - 1pm

100 College St, 11th Floor, Workshop 1116

Lunch will be provided!

