# Thesis / Internship Topic: Metabolic Modeling and Digital Biomarker Research with My-Nutri-Diary

**Short description:**

Evaluation and development of AI-based algorithms for metabolic modeling and digital biomarker analytics in digital smart assistants.

**Goal:**

The goal of this interdisciplinary project between Computer Science and Medicine is to develop and evaluate algorithms and methods for metabolic modeling and digital biomarker analytics in smartphone-based nutrition, fitness and health apps. Focus will be on methods for digitally-assisted pathological analysis (Cooperative AI) and therapy design. We offer several exciting topics within this project for students, including metabolic modeling, pre-processing and annotation of nutrition data with AI-based algorithms, digital biomarker analytics, and system/app development. The project will be carried out in collaboration with **Christoph John**, Ph.D. (Univ. Otago) from **My-Nutri-Diary** (https://my-nutri-diary.org/), who provides us with access to the My-Nutri-Diary Analytics Platform as enabling research ground for the development of next generation smart assistance algorithms.

**Note:** Applications of "external" candidates are welcome!

**Keywords**: Smartphone App, Nutrition, Image Analysis, Visualization, Computer Vision, Machine Learning, Deep Learning, AI, System/App Development.

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