**Goal of the Lab**

- Effective integration of techniques from
  - Human-Computer Interaction (HCI)
  - Information visualization
  - Machine Learning
- Teaches students
  - Data collection and management
  - Data analysis
  - Interactive data visualization
  - Visual analytics

**StudyCompass**

Helps UDE students set course schedule
- Data extraction and aggregation of INKO department courses from LSF and VDB
- Detection of conflicting schedules

**E3Selector**

Provides insights into E3 module courses
- Data scraping of E3 courses from LSF
- Search, filter, sort, and rate E3 courses

**CourseRecommender**

Provides course and study program recommendations to new students
- Data collection of Engineering courses & study programs from LSF and VDB
- Personalized recommendation based on Knowledge Graphs (KG), NLP, and Word Embeddings

**Exploratory Learning Analytics Toolkit for Students (ELAS)**

- Support UDE students in their learning activities
- Collection of Learning Analytics applications developed by students for students
- Technologies used: React, Flask, Neo4j, PostgreSQL, scikit-learn, NLP, recommender systems, and visualization libraries