

## Main Seminar in Information Systems: Explainable AI Summer 2025

### Course Description:

Explainable AI refers to a subfield within Artificial Intelligence that focuses on developing models that can provide human-interpretable explanations for their decisions and actions. Unlike traditional "black-box" AI, where outcomes are difficult to comprehend, explainable AI aims to provide insights into how a particular AI system arrives at its conclusions. By offering transparent and understandable reasoning, explainable AI enhances trust, accountability, and fairness in AI applications across various domains, ranging from healthcare and finance to autonomous vehicles and beyond.

During the seminar, each student will present a research topic from the following list:

- Algorithm aversion
- Local Interpretable Model-Agnostic Explanations
- Shapley Additive Explanations
- Saliency maps for neural networks
- Permutation feature importance

We have weekly presentations. During each slot, one student presents the contents of a paper.

### Target Group:

This Seminar specifically addresses students in all IMP disciplines, as well as in the M.Sc. Economics and M.Sc. VWL programs. There are no formal prerequisites. Successful participation in the seminar is a prerequisite for writing a Master's thesis at the chair.

### Organization:

Registration: **By April 16 (end of day), 2025**

Application via email to [joerg.ebner@is.uni-freiburg.de](mailto:joerg.ebner@is.uni-freiburg.de). **Make sure that the following information is provided:**

- First name, last name
- Matriculation number (Matrikelnummer)
- Transcript of records

- Attended lectures and seminars at our chair and grade obtained
- Study program, semester
- Short description of experience level in Python or R

Response whether application was successful will be sent out shortly after the registration deadline

Meetings: **Wednesdays at 10ct, Seminar Room 02.012, Rempartstraße 16,  
Kick-Off Meeting: April 30, 2025**

### Communication:

Communication is done via email. All materials are provided on Ilias.

### Topics:

Exact topics along with hints on literature will be announced at a later point.

### Policies and Procedures:

Grading: oral exam, presentation and participation in discussions

Presence is mandatory during all meetings.

**ECTS:** 6

**Credit points are applicable to:** M.Sc. BWL PNPM: Allgemeine BWL,  
Wirtschaftsinformatik  
M.Sc. VWL (2011): BWL, Wirtschaftsinformatik  
M.Sc. VWL (2014): Business Analytics  
M.Sc. Economics: Elective in Information Systems and  
Network Economics profile  
M.Sc. Computer Science: Wahlmodule BWL und VWL

### Chair:

Albert-Ludwigs-Universität Freiburg  
Prof. Dr. Dirk Neumann  
Department of Information Systems  
Rempartstraße 16  
79098 Freiburg