



UNIVERSITÄT ZU LÜBECK
INSTITUT FÜR MULTIMEDIALE
UND INTERAKTIVE SYSTEME

Crash Course Julia & Agents.jl



Mirjam Kretzschmar, UMC Utrecht
Leonard Stellbrink, University of Lübeck

- It's easy to use!
- Similar to Python (also has good integration)
- Not object-oriented!
- Extensive documentation available:
<https://docs.julialang.org/en/v1/>
- Or in VS Code: Hover over highlighted text



- Run code line by line
- Symbols :symbol1, :symbol2
 - Immutable identifiers
 - Lightweight, interned strings
 - Here: used to describe parameter choices
- Precompilation might take some time, but only has to be done once (after package installations)



- `function!` ← exclamation mark indicates in-place operation
- `function(positional_argument; named_argument = ...)`
 - `function(; ...)` -> only named arguments
 - `network_type = network_type` not necessary! (if the same)



- Framework for agent-based modeling
- Discrete time simulation
- Three main components
 - Agents (acting individuals)
 - Environment (space) – in our case: GraphSpace
 - Changes (rules for agents and environments)
- Run model (agent_step, model_step)