Swiss SUMO Network Reconstruction - April 2025 Roadmap Summary

Project Paths

- Script folder: D:/PhD/codingPractices/progress-report-dec-2024/scripts/april\_2025/

- SUMO network output:

D:/PhD/codingPractices/progress-report-dec-2024/sumo/inputs/april\_2025\_swiss/

- Raw data: data/raw/swiss/

- Processed data: data/processed/

- Map output: outputs/

Completed Phases

- Phase 1: Extract Nodes & Edges

- - Script: extract\_nodes\_and\_edges.py

- - Output: rail\_nodes.csv, rail\_edges.csv

- Phase 1B: Assign Human-Readable Stop Names

- - Script: assign\_human\_friendly\_names.py

- - Output: rail\_nodes\_named.csv

- Phase 1C: Assign Human-Readable Edge Names

- - Script: assign\_human\_friendly\_edge\_names.py

- - Output: rail\_edges\_named.csv

- Phase 1D: Visualize Readable Edges (Optional)

- - Script: visualize\_readable\_edges\_map.py

- - Output: interactive\_readable\_edges\_map.html

Upcoming Phases

- Phase 2: Generate SUMO Node File

- - Script: write\_sumo\_nodes.py (to be created)

- - Input: rail\_nodes\_named.csv

- - Output: april\_2025\_swiss.nod.xml

- Phase 3: Generate SUMO Edge File

- - Script: write\_sumo\_edges.py (to be created)

- - Input: rail\_edges\_named.csv

- - Output: april\_2025\_swiss.edg.xml

- Phase 4: Generate Empty Connection File

- - Script: write\_empty\_connections.py

- - Output: april\_2025\_swiss.con.xml

- Phase 5: Run netconvert to build .net.xml

- - Script: generate\_net\_with\_netconvert.py

- - Output: april\_2025\_swiss.net.xml

- Phase 6: Validate Network

- - Script: summarize\_network\_contents.py

- - Output: summary of nodes, edges, network details

Current Status

- Phases 1, 1B, 1C, and 1D completed

- Next Phase: Phase 2 - write\_sumo\_nodes.py

- Data ready: rail\_nodes\_named.csv