Simulating Rumor Spreading in Social Networks using LLM Agents

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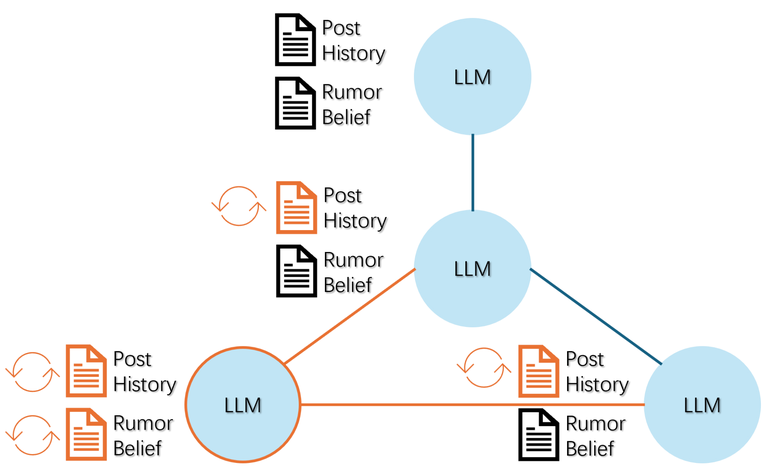
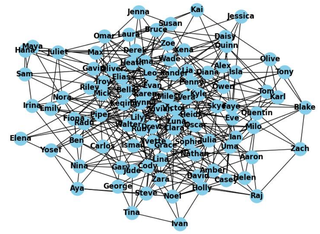
Introduction

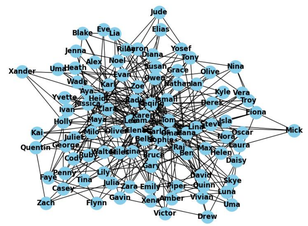
- **Social Network Behavior: Essential for understanding human interactions in social sciences.**
- **LLM-agent-based Framework:**
  1. **LLMs as Agents**
  2. **Rumor Spread Simulation**
  3. **Network Construction**

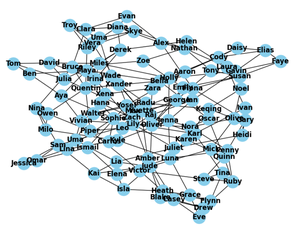
Design

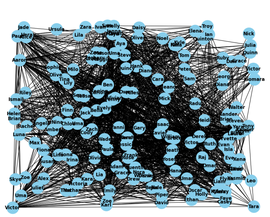


Networks



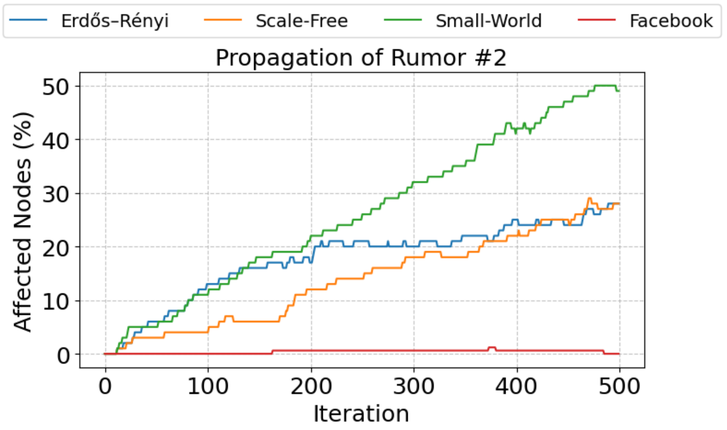


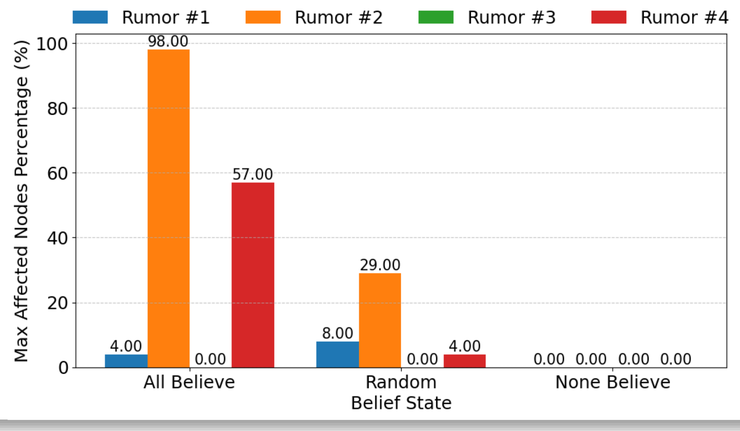


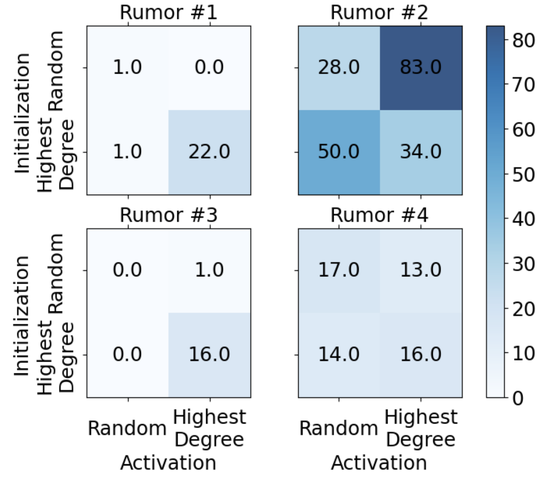


- **Erdős-Rényi**
- **Scale-Free**
- **Small-World**
- **Real World**

Results







- **4 Different rumors**
- **4 Different Network Structures**
- **2 Initialization Schemes**
- **2 Spreading Simulation Schemes**
- **168 Nodes + 1656 Edges**