

## Enhancing Research: Collaborative Multi-Agent AI for Data Analysis and Interpretation

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The study explores a multi-agent AI system for automating social network analysis (SNA) and result interpretation. This system includes specialized agents: User\_proxy (leader and executor), Coder (code generation), Examiner (code correctness), SNA expert (domain insights), and Chat manager (discussion coordination). Using a Coursera dataset of over 10,000 students, the study's initial phase showed promising results. In 20 rounds of data exploration and result interpretation, the multi-agent AI system showed similar performance in data analysis but outperformed OpenAI's single-agent in result interpretation.