



# egoDetect: Visual Detection and Exploration of Anomaly in Social Communication Network

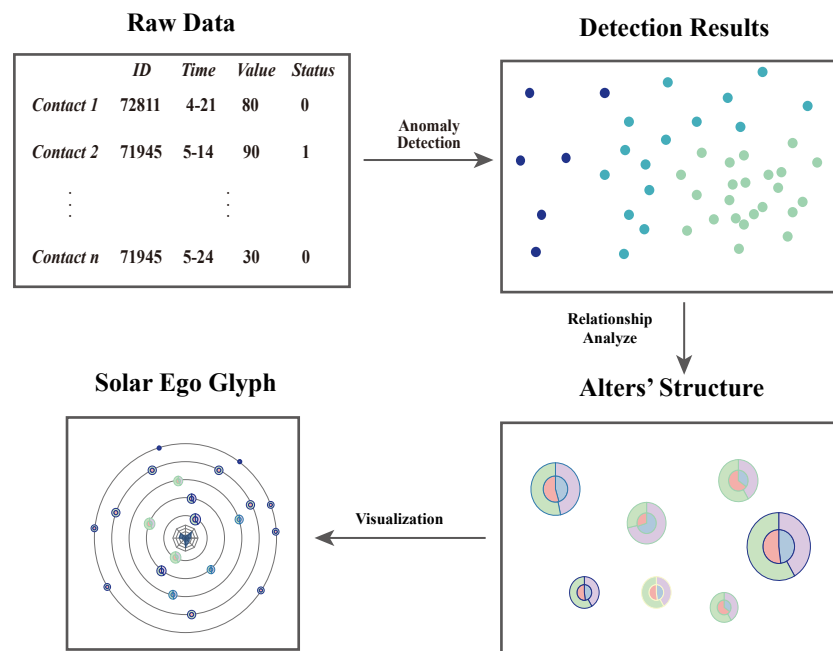
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## Introduction

In this work, we design a novel visualization system, egoDetect, which combines the time series and can explore anomalies from both global and local perspectives. We use the temporal LOF algorithm to filter the data. Compared to the existing work, it can detect anomalies in the data of social networks without tags. Besides, inspired by the solar system and the social brain hypothesis, we have designed a novel glyph to explore an ego's topology and the relationship between egos and alters. It can help experts have an intuitive analysis on egos. We also add friendly and intuitive interactions.

## Overview



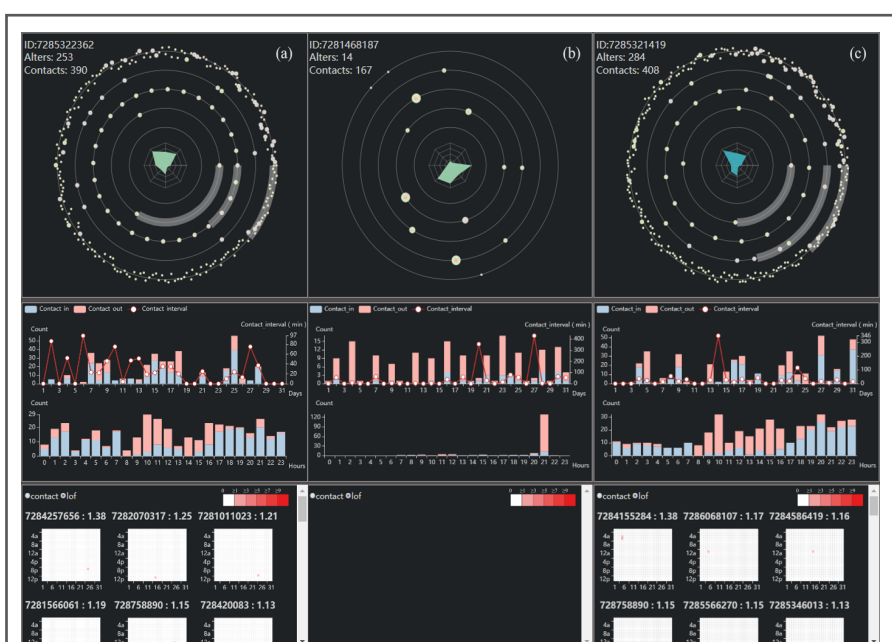
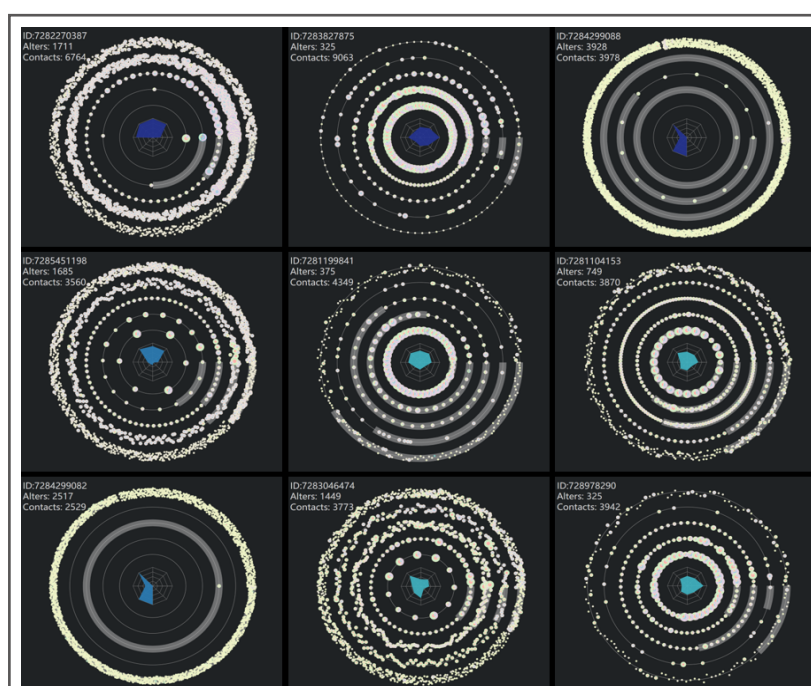
Our system can explore as follows:

- 1. Rate Ego's Anomaly:** Scores can help us quantify the level of anomalies, which helps experts quickly target interested egos.
- 2. Show the Relationship Between Egos and Alters:** Network topology is very useful in making a more in-depth analysis from a sociological perspective.
- 3. Drawing Egos' Portrait:** A user portrait can help experts understand the whole network.

## Design



## Case Study With A Real Dataset



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