**Data Analysis: Statistical Modeling and Computation in Applications** 

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In this lecture, we will

- Introduce the notion of centrality .
- Introduce degree centrality and eigenvector centrality and study approaches to computing these measures.
- Understand how eigenvector centrality does not work for **directed acyclic graphs (DAGs)** and introduce **Katz centrality** as a better notion of centrality than eigenvector centrality.
- Further introduce **page-rank centrality** to fix issues with Katz centrality.
- Combine inward and outward importances in one iterative algorithm to compute **hubs and authorities** scores of nodes in a graph.
- Introduce closeness and betweenness centrality and learn how to compute them.

## **Lecture Slides**

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