

Social networks analysis can be used to study the society's structure, its development and the people's behavior. In this bachelor thesis, we focus mainly on detecting communities in social networks. We introduce the basic methods for significant nodes analysis. We discuss several different approaches to detecting communities, namely detecting hierarchical network structure, overlapping communities and communities in dynamic networks. We introduce a function called 'modularity' and describe its use in community detection. The work then focuses on implementing several algorithms (Louvain algorithm, Link clustering algorithm, SCAN, DSCAN) in Python using the NetworkX library. We then applied the algorithms to Enron employees e-mail network and attempted to reveal communities in it and describe how their structure was affected by major events in the company.