**Executive Summary**

The ‘Trust-Based Recommendation System’ is a web application that facilitates scientific collaboration. The project is based on the ongoing research on collaborative systems done in conjunction with NASA and led by Prof.Jia Zhang.

The application allows users to search for publications and authors. The relation between different authors and the authors’ list of publications can be visualized. There is an option to view the trust score of each author in a particular field. The trust score is calculated based on the number of papers published by the author and coauthorship. The product has got a map-view which shows the geographic regions where most of the research happens in a particular field.

The dataset used for the project is the dblp1  dataset. The data has been stored in a MySQL database and is fetched through prepared statements. The dataload is part of the ETL module which includes a custom made parser to parse the dblp xml and load the data into the tables. The application has been developed using the Play2 framework which consumes data in json format. The server sends the data in RESTful manner which makes it possible to separate the front end and back end and run it as a stand alone application. Play uses a combination of java and scala to render the web pages. D3.js has been used for the visualizations. Google earth API has been used for integrating map into the application. The trust score consists of two components: the knowledge factor and the social factor. The knowledge factor depends on publication channel, publication time and number of citations. The social factor depends on the coauthorship. The final trust score is a weighted sum of these factors.

The project goal was to develop an open source product for scientific exploration. We had the opportunity to learn many new technologies during the course of the development. We see the potential to develop this product into a full fledged website that would benefit the research community.