**Background and Motivation**

Studies show that, per year $1.6 trillion is being spent on Research and development worldwide out of which U.S. alone spends $465 billion. There has been a continuous contraction in budget through the past 50 years. This necessitates efficient utilization of these funds so that it will benefit humanity to the maximum possible extent.

NASA, which is the one of the most important government agencies that fund research and development in the US face the same constraints. This is coupled with scientists working on disparate domains but overlapping problem sets. A lot of redundant research working is happening which can only be avoided if there is a proper platform which helps people find what are the publications in a particular field and who are the experts in that field. There is a need to accelerate research through collaboration. Accelerating collaboration by making it easy to identify collaborators working on the same problems is important. NASA’s Earth Exchange (NEX) platform aims to provide a cloud-based platform as a service to accelerate big data analytics and scientific collaboration in Earth science. There is a possibility of extending to or integrating with subject domains too in future.

Collaboration between NASA and CMU-SV started 2 years back in order to come up with a trust based recommendation engine that would facilitate scientific collaboration. There was a need to develop a system, which recommends experts and collaborators based on domain and trust. The previous teams who worked on the trust based system developed an algorithm to calculate trust based on knowledge reputation and other social factors. Our focus was to develop a prototype which productized the large amount of research work that had been done in this field. Our aim was to develop a product that would help find existing research in a particular field, find the experts in that field, figure out of these experts who can act as collaborators and perform all of these tasks leveraging the user’s trust. From the very beginning of development, our prime focus was accessibility and usability of the product