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User-Aware Multi-Dimensional Data Exploration for Deep Carbon Observatory

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Data discovery has become a big issue along with recent trends in Big Data. Due to the heterogeneity of the datasets and domain specific characteristics, data need to be visualized accordingly with different temporal, spatial and logical dimensional features. Many data portals have been developed to provide an intuitive approach for viewing the dataset. However, most of the data portals do not consider the dimension of people: users with different expertise might wish to view the the data from different perspectives. In this work, we extend the S2S (Rozell et al.) work to enable customized data visualization based on a user's profile. Meanwhile, the platform provides programmable interfaces for extending visualization widgets such that a community can both benefit from and contribute to the visualization platform. We demonstrate our work based on datasets from the Deep Carbon Observatory VIVO platform.