Project Proposal 2

Project Title: Scientific Data Visualisation in Virtual Reality

Goal: Evaluate various softwares for data visualisation for chemistry, biology and big Data Visualisation

Project Idea:

Analyse following softwares:

Chemistry and Biology-
Chimerax VR - molecular-visualization tool for proteins
ExMicroVR: 3D Image-stack Viewer - Scientific Image Research
ConfocalVR: Advanced 3D Image-Stack Viewer
Arivis Vision VR - neuron tracing image and data Visualization in VR
ParaView- Structural Analysis and Fluid Dynamics and Science

Big Data Visualisations-
Virtualitics- Collaboration - geospatial data and other types of data(3D datasets- work and manipulate)
DataViewVR - Avatars
3Data- available in VR
Immersion Analytics(seven data dimensions in one)

Others I might consider-

Llama Zoo- Mining with AR/VR Data Visualization
iVIZ
Juicebox VR

Things I will evaluate:

Collaboration- Collaborative features in VR for data visualization and Avatars
Different features and types of data allowed by comparing Science(chemistry and biology softwares) and comparing Big Data Visualization Softwares
Analysing Big Data Visualization Softwares for: Dynamic Projection(graphs, tree, Image, etc.), Interactive Filtering, Scaling Images, Interactive distortion, Interactive combinations

Deliverables:
Installations, Analysis, features and dataset file types for each above mentioned softwares

In-Class Activity:
Collaboratively experience big data visualization in Virtual Reality

Milestones:
3/18-

Apply Licensing

Complete setup of available softwares

3/23-

Evaluate Virtualitics and DataView VR

Add wiki contribute about all features of these softwares

3/25-

Evaluate and add wiki contribution of 3Data and Immersion Analytics

3/30-

Comparative Analysis of Big Data Softwares

4/01-

Evaluate Chimerax VR, ExMicroVR, ConfocalVR

Add wiki contribution of features and evaluation of these softwares

4/06-

Evaluate and add wiki contributions for Arivis Vision VR and ParaView

4/08-

Comparative Analysis of Different Chemistry and biology softwares

4/13-

Propose features based on the comparative analysis

Final Presentation