

Data & Visualization Weekly Projects Report

2021_12_16

Active Projects

Active Development

- CATalyst data studio vis wall playlist
 - Kiri Carini's assistant sent me a bunch of his material and added it to the playlist
 - I included some code that would shuffle the entries before displaying them
 - Figured out that if we load the app in two separate web browsers and display one on each side of the big vis wall we get 2x the playlist demos
- Thermal Imaging Project
 - Met with team on tuesday and discussed needs in the final part of this project
 - Actively trying to setup the code on a raspberry pi to test whether these can be used out in the field at the mines with the cameras
 - Started running code on HPC and devoped a small visualization tool to display tick mark results on an axis who's length is determined by the length of a video
 - this should help the clients go through 12 hour videos and pick out what sections have most activity to watch closely
 - meeting with Chad on friday to discuss the extension proposal
- Vulkan on HPC
- Streaming Technology for HPC
- Data Visualization Roadshow With Jeff Oliver and Kiri Carini
- Independent Study Abby Collier
- Stellarscape Astronomy Multimedia Dance Performance
 - Found out the piece will be performed in a few places after the U of A, SXSW and Athens Greece
 - Met with the director to make changes to effects in 1a related to getting the size of Hayley consistent and correct for each of the effects
 - Figured out how to use an audio device in to control the audio reactive particles
 - Will be using this on friday when meeting with the Taiko Drummer performer
- Virtual Nature
 - Maria recently submitted the Epic grant, awaiting news related to this
- Radiology 1St Year Resident Carl Sabotke

Consultations

- Sarah Stueve d3 brushing
 - Sarah attended my drop ins and asked for assistance with using d3 javascript visualization library's brushing for interactive visualizations
 - I provided several examples that covered the basics and a more specific example related to the work for her assignment
- Volumetric Capture presentation emergency request CDH
 - I assisted Daniel Shevelev in getting material together at the last minute for a conference presentation related to the volumetric capture rig at the CDH
 - Ultimately we just clipped existing depth camera footage and added audio tracks to it using the HPC.
 - In the future we may have a collaboration with this group to help them reduce their dependency on the Holokit suite of volcap tools that ran too slow and caused some of the panic to get ready for the presentation.
- Shane Thomas using python pandas
 - I worked with Shane in drop in hours to help merge several spreadsheets for his research into a single one
 - We also needed to filter out certain rows based on student responses on a survey and merge the different sized dataframes using values from an ID column
 - Much of this was new to me
- Visit remote visualization support
 - Spent more time working on this and figured out how to redirect between different machines
 - Waiting to hear back from the client on this before creating a confluence page related to the setup

Upcoming

- TURN UP Festival Performance NYU/UA collab
- Volumetric Capture processing on HPC
- Has Faculty Collaborations With Holodeck
- Ray Tracing On The Hpc
- Observablehq Portfolio Of Data Visualization

Completed For Fiscal Year

Recently Completed

Workshops/Trainings

- Mt. Lemmon In Your Pocket-Creating A Virtual Reality Tour
 - https://rtdatavis.github.io/#GIS_week2020
- Presentation For Civil Engineering Department

- <https://docs.google.com/presentation/d/15Z9zcxU4vIIgFPnKEcaGv9GH7JtjNdx4Xpnjec0EzEc/edit>
- Resbaz Organizer And Workshop Provider
 - https://hackmd.io/-XS5Mqh8TA2EHjTHCQ_4tw
- Tech Core Level Up Presentation Monday, Sept 28 2020
 - <https://rtdatavis.github.io/#techcoresept28>
- Tech Core Level Up Presentation Tuesday, Mar 17 2020
 - <https://rtdatavis.github.io/#techcoremar20>
- Womens Hackathon: Visualization On The Web Workshop
 - <https://womenshackathon.arizona.edu/>
 - <https://www.youtube.com/channel/UCe1YiJ53o3qcayVs4cipeXA/videos>
 - <https://www.youtube.com/watch?v=VLwPOtqW8oM>

Completed Projects/Collaborations

- IEEE Satellite Vis Conference Planning
 - <https://www.appsheet.com/start/7e25f1d2-e9a4-4eec-a31a-5edd275f3059>
- Collaboration With Techcore’S Summer Internship
 - https://hackmd.io/xi_m4Kj6QDenBR3ZAFN3iw?edit
 - ‘Project folder on gdrive’: <https://drive.google.com/drive/folders/13v9QfUFVjQD-x7dh8chQZFvAxmy5zmx6?usp=sharing>
 - ‘videos’: <https://drive.google.com/drive/folders/18tT28oLiXFH1wH8NGUwSU1K0URyzJq9o?usp=s>
 - ‘Pecha Kucha style presentation’: <https://docs.google.com/presentation/d/1n6ggKJ-oG7fqHfVsLMnuYkAVh095B1RA7EcNx1RQ12M/edit?usp=sharing>
 - ‘presentation video’: <https://www.youtube.com/watch?v=EiQ9S5lNbA8>
- 3D & Vr Retrofit Azlive
 - <https://rtdatavis.github.io/#retrofitAZLIVE>
- Bio5 Virtual Reality Tour
 - <https://rtdatavis.github.io/#bio5-vr-tour>
- Covid Retail Mitigation Web Scraping
 - <https://rtdatavis.github.io/#retailscraping>
- Force Directed Biochem Networks
 - <https://rtdatavis.github.io/#biochem-networks>
- Migrant Forensic Empathy Project: A Digital Borderlands Grant Initiative
 - <https://mfemigrantdeathmap.baylyd.repl.co/>
 - https://devinbayly.github.io/digital_borderlands_conversion/src/mesh_test.html
 - https://devinbayly.github.io/digital_borderlands_conversion/src/index.html
 - https://hackmd.io/Qo_HmwmwSTG-QPYVTJl0Lg?view
 - <https://osf.io/v9swc>
- Neuro Choropleth
 - <https://rtdatavis.github.io/#neuro-choro>
- Oyster Vibrio Literature Review
 - TBA
- Spring Break Covid Photo Maps
 - <https://rtdatavis.github.io/#spring-break-covid>
- ENVs Term paper Consultation on Cu+ exposure and environment re-

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Completed Consultations

- Discussion about Social Network Analysis Visualizations
 - NA
- Advice For Thesis Defense Visualizations, Sabrina Nardin
 - NA
- Bryan Carter Photogrammetry
 - <https://sketchfab.com/3d-models/churche-maze-photogrammetry-d0767af08a5d498fb960efe3ac83385f>
 - https://drive.google.com/file/d/11E5_912vW6kuPBxcujGKs-UQD9S3jA-H/view?usp=sharing
- Annalysa Lovos Publication Figure Rescaling
- Lilliana Salas GIS GDP
- Arminda Estrada, ECE

Infrastructure Developed

- Remote Visualization Infrastructure Development spring 2021
- Autamus Web Interface
 - https://rtdatavis.github.io/#autamus_interface
- Virtualgl For Nvidia Accelerated Remote Hpc Visualizations
 - <https://rtdatavis.github.io/#virtualgl>
- Xpra And Singularity For Comprehensive Graphical Application Support On Hpc
 - <https://rtdatavis.github.io/#xprasingularity>

Protocols and Analysis Developed