Data & Visualization Weekly Projects Report 2021_11_08

Active Projects

Active Development

- CATalyst data studio vis wall playlist
  - Met with Jen and Jeff to discuss putting the visualizations from previous years Visualization challenge finalists on the big display wall using my playlist technique - now just waiting for the links to be sent by Jeff
- Thermal Imaging Project
  - Met and discussed questions related to how to get videos that I can use for my testing passes - I also started making python class diagrams for simplifying the process of exploring combinations of algorithms in the overall frame processing - I shared a doodle of an overall diagram representing the different steps of the process with Ed and he's in agreement that this is what they need for their December review meeting with NIOSH
- Vulkan on HPC
- Streaming Technology for HPC
  - Had a meeting with Ryan and Dave from TESS and they installed cisco vpn on the machine that is plugged into the big display wall - Unfortunately the original machine that I was going to use there had a catastrophic bios failure which is not so good - In the future the options for using the wall as an HPC display are now better supported
- Data Visualization Roadshow With Jeff Oliver and Kiri Carini
  - Met with Kiri's student to experiment setting up the AR Sandbox which we are thinking of displaying at the GIS day on the 17th of Nov - Also started planning presentation for the Eller Tech Core Level up students
- Independent Study Abby Collier
  - Met up over zoom this last week and worked on adding trails to the fluid driven particle effects
  - We also spent time trying to work out the dynamics of the climax effect for movement 2a
- Stellarscape Astronomy Multimedia Dance Performance
  - Went to Kay's office and worked on her show machine
  - Built new system for supporting complex effect sequencing with support for restarts, and effect indexing for testing out the effects we have built for movement 2a
- Virtual Nature
  - Met with Omani and set up Christine's old computer to be her work station going forward
  - She is going to practice using Unreal to simulate sound propagation

in natural environments
- I'm still going through a C++ Unreal course to make sure we can support Maria Harrington from UCF, and her collaboration with UA staff Greg Barron Gafford, and Aaron Bugaj of the Biosphere2
- Radiology 1St Year Resident Carl Sabotke

Consultations

- Visit remote visualization support
  - This consultation is aimed to make our HPC systems setup the way other large compute centers are for using the Visit visualization tool - I've been working with folks from LLNL to learn about how the setup for this kind of thing works - It's also possible that the client is going to be content with just instructions on how to use the hpc vpn to skip doing multiple jumps for their connection

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

- Arminda Estrada, ECE
- IEEE Satellite Vis Conference Planning
  - https://www.appsheet.com/start/7e25f1d2-e9a4-4eec-a31a-5edd275f3059

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

- ENVS Term paper Consultation on Cu+ exposure and environment resilience
- 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

Completed Consultations

- Annalysa Lovos Publication Figure Rescaling
- Lilliana Salas GIS GIDP
- Arminda Estrada, ECE
- 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

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