IDEAS
Focus ~~Summer~~ School
Visualization

Welcome!

What we will do

- Visualization theory & practice

- Part 1: In-depth instruction with visualization tools
  - Mornings   = Lecture / Discussion / Hands-on tutorials
  - Afternoons = Independent work + "Show and Tell"

- Part 2 : Independent projects
  - Mornings   = required attendance
  - Afternoons = some optional attendance (noted in syllabus)

  - Monday Feb. 1 : final demos

Topics : Part 1

- Tues. – 2D Visualization : Design + Matplotlib

- Wed. – 2D Interactives with Bokeh and Plotly

- Thurs. – 2D Intro to web and interactives with D3.js

- Fri.   – 3D Interactives with ParaView and WebGL

- Optional weekend activity : explore other software...

Additional Software

- I encourage you to explore these independently. There are walkthroughs and notebooks for many of these on our GitHub repo.

  - Volumetric Data : *VisIt*

  - Web-facing Tools : *x3dom*, *Plotly*, *shiny*, *datawrapper*

  - General Interactives : *OpenGL*, *Processing*, *Unity*

  - Artist Tools: *Photoshop*, *Illustrator*, *Maya*, *Blender*, *ffmpeg*, *Image Magick*

  - Python Tools : *Seaborn* , *Glue*

  - Mapping : *GMT*, *NASA WorldWind*, *cartopy*, *basemap*

  - R : *ggplot2*

  - Other utilities: *WebPlotDigitizer*, *Fiji*

Project : Part 2

- **Objective:** apply the skills you learn from this course to a visualization project of your choice (ideally related to your research).

- **Important Dates:**
  - Mon. Jan. 25 – Project proposals (informal 1-on-1 with Aaron)
  - Wed. Jan. 27 – Projects half completed (check in with Aaron)
  - Mon. Feb. 1   – Project demos (due to Aaron 2pm, presentations 3pm)

- **Submission Material:**
  - 1-page description (e.g., a README file)
  - Pictures / videos / website showing your work
  - Any necessary files / materials

- **Demos – NOT POWERPOINT PRESENTATIONS !! :**
  - 10 minutes each = 7 + 3 for questions

GitHub

- **Clone my repo with our class materials:**

  git clone --recursive https://github.com/ageller/IDEAS_FSS-Vis

- **If/when there are updates:**

  git pull --recurse-submodules