

Video:

A video demonstrating the project can be seen here: <https://www.youtube.com/watch?v=d4wrTtsGL1M>

Installation:

Your first option for accessing the project is through the github-hosted site at https://ijedi1234.github.io/CS424_Project3/

Begin a python server in the project directory that has index.html.

If you use Python 2.7 or below, begin the python server through the command "python -m SimpleHTTPServer [port]" .

If you use Python 3 or above, begin the python server through the command "python3 -m http.server [port]" .

Use a usable port number for [port]. 8080 is a good number for this.

Then, go to localhost:[port]. If you used 8080 for the port number, use localhost:8080.

Responsibilities:

Louis Ludkowski: Interpolation visualization, smoothing, bootstrap introduction to the project.

Patrick Tam: Slope visualizations, mouseover.

Patrick Moriarty: Riffle/Pool visualizations and derivation.

Notable Visualization Tasks:

Discover – Using mouseover, users can discover the true and interpolated versions of river elevations, as well as the water surface elevation. Users can also use the analyze button to find our riffle and pool information in the river.

Browse – The user may browse the rivers and river ranges as they desire using the dropdowns. They can also browse sections of the river using the “Go Left” and “Go Right” buttons.

Annotate – The slope and coordinate information at the bottom states information unique to the river at the place down the river indicated by the mouseover.

Enjoy – The slope and interpolation visualizations are very pleasing to the eye, and can be considered amusing when mousing over the river horizontally somewhat quickly.

Lookup – One can quickly get to the location of a riffle or pool by using the range dropdown to go to a specific horizontal river range.

Present – Riffles and Pools are presented in blue and orange, respectively, on both the analysis table and the top visualization.

Summary – The visualization under the riffle/pool visualization is a summary of a whole given river; it shows the whole river, but only shows one data point per pixel.

Interesting Results:

- River bed slopes with an absolute value greater than 0.1 are uncommon, almost rare, but can be found easily on a river with a very steep cliff.
- Shorter rivers can provide smoother results.
- No river resembled a square wave.
- Rivers are highly consistent in either increasing in height or lowering in height as one traverses down the river.