

Advanced Web Development and Web Scraping

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Why learn “advanced web development”

- You can develop web pages (obviously)
- You can add features to web pages (i.e., develop browser extensions)
- You can answer questions by extracting and parsing (scraping) web page data
- You can retrieve information and answer questions by using web page application program interfaces (APIs)
- You can automate web-tasks such as logging onto a web site

What did you guys do?

- Analysis and Visualization of Weather Data

- Weather Duck
- Climate Tracker
- OpenWeatherMap API

- Movies and Games

- Movie Search Tool
- Video Game Archive
- Dungeons & Dragons Selenium Web Scraper
- Shiny Movies

- Color legend

- Chrome extension
- Shiny application
- Web page
- Web scraper

What did you guys do (con't)?

- Economics
 - Find Flight Price
 - Novice Advisor
- Science
 - Visual Analysis of Breast Cancer Data Using a Shiny Application
 - The B.A.D. website
- Politics
 - Who is Your Representative?

- Color legend
 - Chrome extension
 - Shiny application
 - Web page
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Other examples

- Identification of bots on Twitter:
 - <http://www.pewresearch.org/fact-tank/2018/04/19/qa-how-pew-research-center-identified-bots-on-twitter/>
- HiPub Chrome extension for knowledge discovery:
 - <https://www.ncbi.nlm.nih.gov/pubmed/27485446>
- The Cambridge Carcinoma of the Prostate App
 - <https://bioinformatics.cruk.cam.ac.uk/apps/camcAPP/>
- *shinyGEO*: analysis of gene expression data
 - <https://gdancik.github.io/shinyGEO/>
- CongressEdits: Tracks changes to Wikipedia made from IP addresses from the U.S. Congress
 - <https://source.opennews.org/articles/automating-transparency/>