

Week of:	Description of Activities:
8/24	<ul style="list-style-type: none"> • TOTAL 2-3 hours • Met with Brandon, Viv, Mike. Introductions. Will meet weekly on Tuesdays 7:30am PT <ul style="list-style-type: none"> ◦ Teams meeting link for Tuesdays ◦ Reviewed Student Project FY21 Notes (mission areas, project description, etc.) ◦ Don't have access to https://code.usgs.gov/bserna/usgs-dash-project-generator (need login)
8/31	<ul style="list-style-type: none"> • TOTAL 5-6 hours • Tuesday 1 hour <ul style="list-style-type: none"> ◦ Met with Brandon. Will connect on Slack, install CookieCutter, Goals: open dashboard code template and play around with sample data, share a GitHub project with Brandon by the weekend. • Sunday 1 hour <ul style="list-style-type: none"> ◦ Read about CookieCutter, tried to unzip and open the usgs-dash-project-generator-master.zip.cpgz file without success. ◦ Set up Slack #usgs_science_data_internship ◦ Set up GitHub https://github.com/PortfolioSQA/USGS_Catalog_Dash • Monday 3-4 hours <ul style="list-style-type: none"> ◦ Set-up environment and became more familiar with dash ◦ Created a simple dashboard using sample data using my own code. Will request new cookiecutter template file again Tuesday morning.
9/7	<ul style="list-style-type: none"> • TOTAL 7 hours • Tuesday 1 hour <ul style="list-style-type: none"> ◦ Met with Brandon. Created Slack Channel. Resent CookieCutter file and opened together. Goals for the week: check out the dash template, look at xml from Science Base Catalog (project -> more details) and think about summary graphics/tables. ◦ Notes: 8 USGS regions, 6-7 mission areas, many science centers! Connect with elastic search index to fill contents (makes aggregation harder), new elastic search package works with pandas dataframe. • Friday/Sunday 2 hours <ul style="list-style-type: none"> ◦ Downloaded the cookiecutter template ◦ Played with the dashboard app ◦ Looked through Science Data Catalog xml files to determine which data is available ◦ Proposed a new idea for dashboard to Brandon- Query/Summarize by map boundaries: <ul style="list-style-type: none"> ▪ User first filters by Mission Area, Science Topic, or none (dropdown menus) ▪ User then demarcates geographic boundary requirement on interactive US Map (default is entire US) ▪ Return record count and all records using geographic location and other filters ▪ User may filter results further by Science Center, date, or sort by most frequently accessed records • Monday 4 hours <ul style="list-style-type: none"> ◦ Read about Dash, Mapbox, & Leafly ◦ Installed Shapely, Created Mapbox account

	<ul style="list-style-type: none"> ○ Comments: Polygons are not easy to work with for the user, could choose by selecting geographic boundary by county, state, USGS region, center, or select point and radial distance. ○ What to include in sample data: name, keyword, center, lat/long, dates
9/14	<ul style="list-style-type: none"> • TOTAL 11 hours • Tuesday 3 hours <ul style="list-style-type: none"> ○ morning meeting canceled – will meet next Tuesday ○ Installed faker and created sample dataset to use in dashboard ○ Spent time understanding the bounding coordinates in the xml files <pre><bounding> <westbc>-123.60443114739</westbc> <eastbc>-97.764587398423</eastbc> <northbc>45.032773794668</northbc> <southbc>38.897445871348</southbc> </bounding></pre> • Sunday/Monday 8 hours <ul style="list-style-type: none"> ○ Worked on sample data & dashboard • Questions for Brandon/to figure out: <ul style="list-style-type: none"> ○ How to use a styled map from MapBox ○ Pricing on MapBox – Feasible for USGS? ○ Other options ○ Discuss best way to map boundaries of data collection (& data collected for entire US) ○ Which summaries are most important for USGS? Why? (record count by mission area/science center/popular/keywords) ○ Layer USGS regions on map? ○ Use rows from data table without displaying all need columns (join?)
9/21	<ul style="list-style-type: none"> • TOTAL 16 hours • Tuesday 1 hour <ul style="list-style-type: none"> ○ Met with Brandon ○ To do: Get pricing information for Mapbox, get map working with filtering, fix table, complete aggregate graphs, & place code in template ○ Next week: Get SDC data to play with mapping, use styled maps • Friday 3 hours <ul style="list-style-type: none"> ○ 'Learning App' Got map filtering working with sample data, fixed table, aggregated by visits ○ Posted mapbox pricing ○ Explored SDC data • Saturday/Sunday 10 hours <ul style="list-style-type: none"> ○ Graphed SDC data, but need to clean it up to be able to filter by date/keyword etc. ○ ETL SDC data <ul style="list-style-type: none"> ▪ Dropped NA for missing spatial (8 rows) ▪ Replaced NA for dates, kept year (see questions) ▪ Combined keyword columns ○ 'Sketch' of where to place map/table/graphs in template • Monday 2 hours <ul style="list-style-type: none"> ○ 'learning_app' committed to Github – has SDC data graphed in map by date/science center, ETL python file in folder ○ 'SDC_Map_Dash' template committed to Github - wireframe: <ul style="list-style-type: none"> ▪ Will start working on this version once we decide on layout, filtering ▪ Filter by date, map, filter by keyword (not sci center)

	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ▪ In each tab – Datatable + Summary Stats <ul style="list-style-type: none"> • mappable US data (not nationwide) • Nationwide datasets – mapped? • world/earth/international datasets – mapped? • Questions: <ul style="list-style-type: none"> ○ If nan data is filtered by date, we lose about 10% (600+ rows). Lose the rows? Save them? Include Map/graph? I replaced nan with 1900-present ○ Best way to determine global, continental, local data (using PlaceKeyword). Agree with three tabs? ○ What to do with keywords? ○ Could color markers by ... ○ Moved away from selecting map area to fill table – table fills map (zooming allows user to determine if data is available in a particular area). Do we want map selection ability? Seems messier. ○ Using integer for year – to_datetime doesn't like 1500s ○ Next steps
9/28	<ul style="list-style-type: none"> • TOTAL 7-8 hours • Tuesday 1 hour <ul style="list-style-type: none"> ○ Met with Brandon ○ Notes: <ul style="list-style-type: none"> ▪ Viv may send invitation to bi-weekly meetings Mondays 9am PT – have not received invite ▪ Filter by Science Center & USGS Thesaurus Keyword (not by date) - done ▪ Figure out a 'pretty' way to select all key words/all science centers – note: dash doesn't seem to have one, we can select all, but shows all science centers... ▪ For now, separate global, US, mappable data by place keyword in three tabs - problematic ▪ Create data table and aggregate statistics for each tab ▪ Color markers by science center ○ Other: Fix map so when table returns nothing, no markers are mapped, when global or US data tab is selected – map shows what? Need to ignore rows in data table without lat/lon for the map graph data? Nan Science Center? • Tuesday 2 hours <ul style="list-style-type: none"> ○ Updated journal, separated keywords, created unique USGS thesaurus keyword and science center list for dropdowns • Monday 4-5 hours <ul style="list-style-type: none"> ○ Broke the app trying to add keyword search and spent a couple hours trying to fix it. Started from scratch. ○ Have not successfully separated international data (see graph) so the tabs don't make sense right now. I could work on separating by lon/lat if we want to do this. ○ If we still want to separate by area in three tabs, I need to place the map and science center choices inside each tab to be able to change the map/selection ○ So many Science Centers... can use a select all/deselect etc. need to change font size. How should we display this?
10/5	<ul style="list-style-type: none"> • TOTAL 10 hours • Tuesday 1 hour <ul style="list-style-type: none"> ○ Dropdown with select all – return all data ○ Remove tabs – or use for summaries ○ Zoom into populated marker area

	<ul style="list-style-type: none"> ○ Color markers ○ Fill null Science Data Center with 'Undetermined' ○ Counts/Graph ○ Keywords ○ https://data.usgs.gov/modelcatalog/ ○ https://sciencebase.gov/datarelease/summary/ ○ Word cloud for the datatable keywords (% top 50 terms) • Friday 4 hours <ul style="list-style-type: none"> ○ Combined all data (instead of mappable, US, global) ○ Fixed dropdown & added All Science Centers ○ Added keyword search ○ Removed tabs ○ Fixed null SC -> Undetermined ○ Return Count • Saturday 4 hours <ul style="list-style-type: none"> ○ Fixed & formatted datatable ○ WordCloud ○ Next Steps <ul style="list-style-type: none"> ▪ Zoom to populated markers ▪ Color markers by science center ▪ Make sure key words are searched lower case ▪ Speed up wordcloud ▪ Heroku • Sunday 1 hour <ul style="list-style-type: none"> ○ Researched zoom to markers and marker color
10/12	<ul style="list-style-type: none"> • TOTAL 9 hours • Tuesday 5 hours <ul style="list-style-type: none"> ○ 1-hour meeting with Brandon. Notes: <ul style="list-style-type: none"> ▪ 10/19 check-in biweekly informal 8-8:30 am PT ▪ 10/26 SDM Biweekly 9-10:30 PT ▪ Text changes (see github) ▪ place filters in same search box ▪ update datatable headers ▪ remove browse these data ▪ cache wordcloud for 'all' ▪ keywords - lowercase, remove punctuation ▪ controlled terms - USGS, etc. ▪ bug - CA/iso, count 2, returns 1?? ▪ Color by center/zoom into markers ▪ update button to download CSV ▪ Place 'downloading state' into dt and wc ▪ Heroku ○ 4 hours - completing above list • Friday 4 hours <ul style="list-style-type: none"> ○ 2 hours - completing above list ○ 2 hours - Connect with git SSH, fix files and attempted to deploy with Heroku
10/19	<ul style="list-style-type: none"> • TOTAL 2.5 hours • Monday 1.5 hours <ul style="list-style-type: none"> ○ Meeting 0.5 hours <ul style="list-style-type: none"> ▪ 8am Join Microsoft Teams Meeting ▪ CDI: https://my.usgs.gov/confluence/display/cdi/Home ▪ Model catalog: https://data.usgs.gov/modelcatalog/

	<ul style="list-style-type: none"> <ul style="list-style-type: none"> Sciencebase data releases: https://www.sciencebase.gov/catalog/items?q=&filter=systemType%3DData+Release&filter=browseCategory%21%3DData+Release+-+In+Progress 1 hour – tried to get the app to deploy on Heroku <ul style="list-style-type: none"> Manage.py file? heroku ps:scale web=1 ??? Tuesday – 1 hour <ul style="list-style-type: none"> Met with Brandon, deployed on Heroku
10/26	<ul style="list-style-type: none"> TOTAL 4 hours Monday 3 hours Join Microsoft Teams Meeting 9am <ul style="list-style-type: none"> Missed the meeting this morning. I'll be there next time. 3 hours <ul style="list-style-type: none"> Fixed loading state for count If I place a loading state on map, it doesn't map correctly!? Can you help me figure out why that would be? sci_center colors – works with static data!!! Talk about how to fix this, if we want it. Tuesday 1 hour <ul style="list-style-type: none"> Meet with Brandon and Lisa Zolly Data needed: <ul style="list-style-type: none"> Science center Latest harvest Status Doi citation info DOI Filter by: <ul style="list-style-type: none"> Science Center Dates (Beg, End, Updated, Latest Harvest) Status – Active/Inactive
11/2	<ul style="list-style-type: none"> TOTAL 11 hours Monday 1.5 hours <ul style="list-style-type: none"> 8am Join Microsoft Teams Meeting Tuesday Meeting (0.5 hours) Looked at data (1 hour) To Do: <ul style="list-style-type: none"> Filter by Science Center (datasource) Filter by Status - Active/Inactive (where is this?) Filter by Dates (avail: first_harvest_date, last_harvest_date, last_mdate_check_date, mdate) which? Filter: doi: None Do we use this? Return Table: SciCenter, # citations, doi, status, date? Return Count: dataset count with filters Return # of citations in the last month (don't have by date) Return: Pie Chart of Active/Inactive (if not filtered by this) Flag certain datasets? inactive with citation? Other Questions: <ul style="list-style-type: none"> How do I know if data is active/inactive? Is this if the data has been harvested? What would the row look like if it weren't? For the ORCID availability for retrospective DOI assignment - Do I just check if doi is None?

	<ul style="list-style-type: none"> ▪ Lisa talked about rate of growth of the collection over time (monthly growth? Which dates?) Bar chart ▪ Do we want to show the related primary publications? ▪ Include non-primary pubs for citation count? ▪ Layout similar to dash template? Use tabs? • Friday 3.5 hours <ul style="list-style-type: none"> ○ etl ○ New file from Cookiecutter template using sample data ○ Filter by Science Center (datasource) ○ Filter by Status - Active/Inactive ○ Filter by Dates (beg, end, last updated (mdate), last harvest) ○ Return Table: SciCenter, # citations, doi, status • Saturday/Sunday 6 hours <ul style="list-style-type: none"> ○ Filter by Dates ○ Return Count: dataset count with filters ○ Return: Pie Chart of Active/Inactive (if not filtered by this) • Questions/Issues: <ul style="list-style-type: none"> ○ When I align the CSV download link to the right, it breaks! Why? ○ Using mdate instead of last_harvest_date doesn't work... Worked for a while trying to figure out problem with date type, couldn't find it ○ Fix tab1 so it gives the datatable for selection (doesn't return to all). Why do the other tabs retain filter info, but not datatable?
11/9	<ul style="list-style-type: none"> • TOTAL 8 hours • Monday 2.5 hours <ul style="list-style-type: none"> ○ 9am Join Microsoft Teams Meeting 9am ○ Fix count and commit to new repository on GitHub: https://github.com/PortfolioSQA/SDC_Manager_Dashboard • Tuesday Meeting 1 hour <ul style="list-style-type: none"> ○ TODO: Fix table (so it doesn't change to default when tabs are changed), Fix mdate ○ Talked about NLP project - creating a custom NER to identify models from epubs warehouse?? for the Model catalog. If time permits start researching this. ○ Also talked about volunteering for usability testing for Sophie • Saturday 3 hours <ul style="list-style-type: none"> ○ Fixed mdate ○ Worked on datatable persistence for a couple hours... I can't figure out what to do to keep the table from reverting to default in tab. ○ Changed 0/1 => inactive/active • Sunday 1.5 hours <ul style="list-style-type: none"> ○ Research on how to create custom NER model ○ Tried for another 1-2 hours to debug the table persistence. Used dcc.store, persistence = True, and filtering in another callback. Didn't get it to work ☹
11/16	<ul style="list-style-type: none"> • TOTAL 4.5 hours • Monday 0.5 hours <ul style="list-style-type: none"> ○ Monday 8am Join Microsoft Teams Meeting • Tuesday – meeting cancelled due to power outage • Wednesday 3 hours <ul style="list-style-type: none"> ○ Deploy to Heroku ○ Tab update works in Heroku. Weird! ○ Fixed datatable sort ○ Need to fix table so we can sort by status and right align download link

	<ul style="list-style-type: none"> • Sunday 1 hour <ul style="list-style-type: none"> ◦ Created random dates in Excel for sample data
11/23	Thanksgiving Week – WEEK OFF
11/30	Final Exam – WEEK OFF
12/7	<ul style="list-style-type: none"> • TOTAL 12.5 hours • 1.5 hours Monday Join Microsoft Teams Meeting 9am • 1 hour Tuesday meeting <ul style="list-style-type: none"> ◦ Methods: CNN, SVM, etc... Tasks: Image classification, image segmentation, etc... Applications (use cases): precipitation-induced landslide warning, tracking rainfall thresholds, • 3 hours Tuesday <ul style="list-style-type: none"> ◦ Create sample data (dates for beg, end, update, harvest), change code to incorporate new 'dates' • 3 hours Wednesday <ul style="list-style-type: none"> ◦ Debug code changes for new sample dates, deploy on Heroku, update journal, e-mail Sophie with updates • 2 hours Thursday <ul style="list-style-type: none"> ◦ Create notes document for model scraping ◦ Review text • 2 hours Sunday <ul style="list-style-type: none"> ◦ extract abstract, identify method, task and application ◦ Create txt files with abstracts
12/14	<ul style="list-style-type: none"> • TOTAL 10 hours • 0.5 hours <ul style="list-style-type: none"> ◦ Monday 8am Join Microsoft Teams Meeting • 1 hour <ul style="list-style-type: none"> ◦ 2pm - Meet with Lisa, Brandon, and Sophie • TO DO LIST: <ul style="list-style-type: none"> ◦ Rename dashboard ◦ Link – learn how metrics are calculated ◦ Table – font choice? ◦ Org of interest –> Choose your science center/program ◦ Select dataset status ◦ Explanation of active/inactive ◦ Put date selection in same box ◦ Justify radio buttons ◦ Colon after headers ◦ Remove beg/end dates ◦ Last harvested, last updated –> start date? ◦ Flexibility in search by date? Calendar year? ◦ Dataset Count –> Active, Inactive, Total, pie chart ◦ Make stacked bar graph for active inactive by date ◦ Remove pie chart tab ◦ doi – links? ◦ Alternate IDs for datasets? ◦ Delete widgets in graph area ◦ Format date label ◦ Download –> more usable file name ◦ Help & documentation (Tool tips) ◦ Errors: If it's not working what happens? • 8.5 hours

	<ul style="list-style-type: none"> ○ Complete TODO list, redesign site, insert links for DOI, alternate identifiers, stacked bar chart for counts by date, delete widgets in graphs
12/21	WEEK OFF - HOLIDAY
12/28	<ul style="list-style-type: none"> • TOTAL 7-8 hours • 30 min -Monday 8am Join Microsoft Teams Meeting <ul style="list-style-type: none"> ○ https://data.usgs.gov/datacatalog/ • 1 hour – Tuesday Meeting with Brandon <ul style="list-style-type: none"> ○ Questions: title, markdown – open link in new tab/window for DOI, filter by active/inactive?, explanation for active inactive, Errors ○ TODO for dashboard: table → dbc, tab (dash → SDC Dashboard), Sentence – bold or large numbers, ○ https://dash-bootstrap-components.opensource.faculty.ai/docs/components/table/ – dbc table ○ https://data.usgs.gov/datacatalog/api/docs/v1 , swagger API – look at documentation to get data except citation (leave as null for now) ○ TODO for NER: exploratory functional prototype: look at https://paperswithcode.com/, format text in jsonl, get prodigy (costs \$390), <pre>{ "text": "This is a text" } { "text": "This is another text" }</pre> <p>https://data.usgs.gov/modelcatalog/search</p> <p>Training Data</p> <ol style="list-style-type: none"> 1. https://pubs.usgs.gov/tm/14/a2/tm14a2.pdf 2. https://pubs.usgs.gov/of/2008/1159/downloads/pdf/OF08-1159.pdf 3. https://pubs.usgs.gov/of/2016/1136/ofr20161136.pdf 4. https://pubs.usgs.gov/of/2007/1088/pdf/of07-1088_508.pdf 5. https://www.mdpi.com/2073-4441/8/1/17 6. https://pubs.usgs.gov/wri/1990/4130/report.pdf 7. https://pubs.usgs.gov/tm/12b1/ 8. https://pubs.usgs.gov/tm/2006/tm6b3/ 9. https://www.mdpi.com/1999-4893/1/2/52 10. https://data.usgs.gov/modelcatalog/data/5eb4485782ce25b5135abf28 11. https://data.usgs.gov/modelcatalog/data/5eb4485082ce25b5135abee3 12. https://data.usgs.gov/modelcatalog/data/5f6240eb82ce38aaa2361498 13. https://data.usgs.gov/modelcatalog/data/5eb4485e82ce25b5135abf70 14. https://data.usgs.gov/modelcatalog/data/5eb4485f82ce25b5135abf86 15. https://data.usgs.gov/modelcatalog/data/5eb4485f82ce25b5135abf7c 16. https://data.usgs.gov/modelcatalog/data/5eb4485582ce25b5135abf16 17. https://data.usgs.gov/modelcatalog/data/5f036b3f82ce0afb2446e04a 18. https://data.usgs.gov/modelcatalog/data/5eb4486182ce25b5135abfb0 19. https://data.usgs.gov/modelcatalog/data/5eb4485282ce25b5135abef4 20. https://data.usgs.gov/modelcatalog/data/5eb4486182ce25b5135abfaa <ul style="list-style-type: none"> • 3 hours – Wednesday <ul style="list-style-type: none"> ○ Update journal, look at prodigy (\$390 license), get 10 more text files, create jsonl file (see above links) • 3 hours --Thursday <ul style="list-style-type: none"> ○ Dashboard updates, dbc tables are SUPER SLOW - decided to format dash data table (I have another file with the dbc table I can show if you'd like)
1/4	<ul style="list-style-type: none"> • TOTAL 9 hours • 2 hours - Monday: <ul style="list-style-type: none"> ○ Doctor's Appt- Couldn't join meeting Join Microsoft Teams Meeting 9am ○ 2 hours Install prodigy, en_core_web_sm, etc. Label text, git commit, etc. • 1 hour - Tuesday

	<ul style="list-style-type: none"> ○ Meet with Brandon 7:30 – will meet with Mike & Viv soon, Ruby Gem linguist shows which languages in code, ○ TODO: 10-20 unlabeled texts for evaluation data (good and bad examples), run in prodigy (see slack), try again using shorter NEs, use en_core_web_lg, future: establish list of methods, concept of datasets on prodigy?, deploy dbc table on Heroku and see if its faster <ul style="list-style-type: none"> • 3 hours – Thursday <ul style="list-style-type: none"> ○ 1+ hours Meet with Sophie to talk about Usability Testing ○ 2 hours Evaluation Data (in excel & jsonl) • 3 hours – Friday <ul style="list-style-type: none"> ○ Train/evaluate ner – 0% accuracy, relabeled training set 0% accuracy, read more documentation, tried with models only, frustrating - next combined to 40 for training set and re-labeled. Didn't help <ol style="list-style-type: none"> 1. https://doi.org/10.1126/science.aat4723 2. https://pubs.usgs.gov/of/2001/ofr-01-0002/ 3. https://data.usgs.gov/modelcatalog/data/5ff62dc1d34ea5387df035fa 4. https://data.usgs.gov/modelcatalog/data/5eb4485982ce25b5135abf3c 5. https://doi.org/10.1111/gwat.12397 6. https://data.usgs.gov/modelcatalog/data/5eb4485482ce25b5135abf0e 7. https://data.usgs.gov/modelcatalog/data/5eb4485682ce25b5135abf1c 8. https://data.usgs.gov/modelcatalog/data/5eb4485382ce25b5135abefc 9. https://doi.org/10.3133/wri874163 10. https://doi.org/10.1002/2017JC013204 11. https://doi.org/10.1029/2011JB008968 12. https://doi.org/10.3133/wri974022 13. https://pubs.usgs.gov/tm/tm4f2/ 14. https://doi.org/10.1016/j.ocemod.2010.07.010 15. https://doi.org/10.3133/ofr20151009 16. https://data.usgs.gov/modelcatalog/data/5ef3952782ced62aaae3ef55 17. https://pubs.usgs.gov/tm/tm6a37/ 18. https://doi.org/10.1002/joc.3625 19. https://doi.org/10.3133/tm14A1 20. https://doi.org/10.3133/tm6A43
1/11	<ul style="list-style-type: none"> • TOTAL 9.5 hours • 2 hours - Monday: <ul style="list-style-type: none"> ○ 30 min. Monday 8am Join Microsoft Teams Meeting ○ 1.5 hours – tried again with prodigy, read a bit on topic analysis, dbc table. No pagination, can't sort, slower • 2 hours - Tuesday <ul style="list-style-type: none"> ○ Meet with Brandon 7:30 ○ TODO: Tutorials, analyze n-grams, constrain to better examples ○ Peer review for a “resource review” that Sophie preparing for the CDI Usability Collaboration Area • 2 hours - Wednesday <ul style="list-style-type: none"> ○ Prodigy tutorials https://prodi.gy/docs/named-entity-recognition (Food Ingredient entities) • 1.5 hour - Thursday <ul style="list-style-type: none"> ○ Continued Prodigy tutorial • 1 hour – Friday <ul style="list-style-type: none"> ○ Continued Prodigy tutorial • 1 hour – Saturday <ul style="list-style-type: none"> ○ N-gram analysis of text ○ https://github.com/PortfolioSQA/USGS_Catalog_Dash/blob/master/ngram_text_analysis.ipynb
1/18	<ul style="list-style-type: none"> • TOTAL 10 hours

	<p>Martin Luther King Jr Holiday Monday</p> <ul style="list-style-type: none"> • 0.5 hour - Tuesday <ul style="list-style-type: none"> ○ Meet with Brandon 7:30 – 8:00 ○ TODO: methods NER: try water balance, transport model, etc. separate and then try DE, Lin reg, random forests, etc. (may have to use regex for that), Graphical interface - Keep track of articles that may not be models, New Github directory with files and commands • 2.5 hours – Friday <ul style="list-style-type: none"> ○ New model for methods (1) Used all methods • 4 hours - Saturday <ul style="list-style-type: none"> ○ New model for methods (2) Used geologic models (not stats and ML methods) • 3 hours – Sunday <ul style="list-style-type: none"> ○ Model 3 + notes
1/25	<ul style="list-style-type: none"> • TOTAL__ HOURS • 1.5 hours Monday <ul style="list-style-type: none"> ○ 30 min Monday 8am Join Microsoft Teams Meeting ○ Notes, github commit, ml model
2/1	Monday Join Microsoft Teams Meeting 9am
2/8	Monday 8am Join Microsoft Teams Meeting
2/15	Monday Join Microsoft Teams Meeting 9am
2/22	Monday 8am Join Microsoft Teams Meeting
3/1	Monday Join Microsoft Teams Meeting 9am
3/8	Monday 8am Join Microsoft Teams Meeting
3/15	Monday Join Microsoft Teams Meeting 9am
3/22	Monday 8am Join Microsoft Teams Meeting
3/29	Monday Join Microsoft Teams Meeting 9am
4/5	Monday 8am Join Microsoft Teams Meeting
4/12	Monday Join Microsoft Teams Meeting 9am
4/19	Monday 8am Join Microsoft Teams Meeting
4/26	Monday Join Microsoft Teams Meeting 9am
5/3	