July 31 (0915-)

* Meeting
  + Deliverables
    - Paper into google doc
      * Share with Fontaine and Simona
    - Clean github before handoff
    - Add README to github before handoff
    - Rerun rivanna with updated paths
    - Statistical analysis
    - Summarize results
      * Od counts
      * Path counts
      * Od path counts
      * Od and time path counts
    - As most detail as possible for methodology section
      * Probably will be the most in the program section?
    - Combine ODs into regions
      * Add central coordinate to region
  + Notes
    - Can work from home
    - Can do reduced hours

July 30 (0800-1530)

* Paper writing
* Combing nodes into regions

July 29 (0800-)

July 28 (1.5 hours)

* Grid to district matching

July 26 (0500-0730 – home) (0800-1200 - office)

* Meeting prep
* Meeting
* Fix tableau website
* Set up districts for grid aggregation

July 25 (0600-0900 – home) (0930-1715 - office)

* Fix Rivanna bugs
* Paper
* Statistics start
* Some tableau work
* New DC grid

July 24 (0715-0845 - home) (0915-1615 - Office)

* Paper writing
* Fixing bugs in code process
* Code planning
* Paper writing

July 23 (0700-1500)

* Broke files into smaller data files
* Program is actually up and running on Rivanna
  + Some files are taking up to 40 min to process
    - Should not be happening
* Started outline for paper
* Code planning diagram

July 22 (0700-1500 - office)(2hr at home)

* Worked on combining outputs
* Code planning
* Ran program on Rivanna
  + Too slow
* Did research on format of TRB paper
* Made sure all other scripts are ready for the Rivanna output
* Sent Simona the files she asked for, in easier format
  + Hopefully I get this info back soon
* Wrote script to break up the inrix trip files into a bunch of smaller files
  + This way we can utilize the power of Rivanna

July 21 (5 hr)

* OD map change
* Combine program output
* Code planning

July 19 (0800-1130)

* Meeting Prep
* Meeting
* Send Simona files
* Change od map

July 18 (0545-0800 – Home) (0900-1400 - Office) (1415-1715 – home)

* At home
  + Did work on getting program up and running on Rivanna
    - Github set up and manipulation
* Got wifi key to use personal computer at office
* Updated main to count correctly
* Tableau is installed
* Started meeting notes for tomorrow
* Updated output of analysis to allow for change in only looking at most used paths
  + We can change this cutoff point
* Did slight visual analysis in excel to show risk analysis of different path count cutoff values
* Git push at 1156 from laptop
* Started data upload to Rivanna
  + Finished
* Worked on program on Rivanna

July 17 (0630-0730 – home) (0810-1310 - Office) (1310-1710 – Rivanna Meeting)

* Could not sign into Rivanna
  + Put in help query
* Sent Simona results from running program with new file
  + ‘tripsDetected.csv’
  + Had no hits in 2018
  + Had 11k hits in 2017
* There are two tripsDetected files
  + One in the 2017 folder, and one in the blank folder
* Ran the program
  + With slight alteration to the flow
    - Will only proceed with analyzation if the trip ID can be mapped to a path
    - Great for speed
      * 100k lines takes 4 sec
  + With both files being looked at
  + Results
    - 8k path hits in 2017
    - 9k path hits in 2018
* Rivanna set up
  + Using online gui
* Analyzed the output data to show average count for trips
* Got Rivanna set up and learned how to use

July 16 (0815-1500 - office) (1500-1615 - home)

* Made program read its own output correctly
* Ran code with path analysis
  + Using two files Simona had
    - ‘tripsDetected\_CCS.csv’
    - ‘tripsDetected\_CCS (1).csv’
  + Got 14k path hits
* Got Tableau Online
  + Site
    - <https://prod-useast-a.online.tableau.com/#/site/josephkeoghtableausite/home>
  + Worked on visualizing count data
  + Think I need to resize the nova grid
* Signed up for ‘LinkedIn Learning’
  + Got email from UVa
  + Assume has to do with Rivanna
* Emailed Simona about file not being right
* Went home to set up Rivanna

July 15 (0815-1515)

* Changed analysis output for Fontaine
  + Now shows total proportion encompassed by large od nodes
* Added day of week to time nodes
  + Now there are 7 times more time nodes
* Added way to map trip id to od node quickly
* Reran supermain
  + To get days of the week in the output
* Researched through Simona’s code files to find what will be useful
  + Found files that map trip id to partial path
  + Implemented in main method
* Working on fixing the reading of the outputfile
  + Including paths

July 13 (4hr)

* Utc date time formatting

July 12 (0815-1215)

* Fixed bug in analysis program
* Waiting to fix utc date time files to run entire program again

July 11 (0815-1815)

* Final Meeting prep
* Meeting
  + Summary:
    - Want to visualize data before doing path analysis
    - Add outbound to area of interest
    - Do not want to be super granular with approach
* Reorganized OD
  + Added outbound
* IT Request for Tableau Writer
* Made code to better create information from what code was giving
  + Finished pretty quickly, then made either a bad change or something…
    - Was only updating every other od node
      * Must change tomorrow
* Entered time in workday

July 10 (0730-1630)

* Implemented datetime into objects
  + Was not easy
* Formatted end output for program
* Ran program to get preliminary results
  + Need to see if covering the right area
  + What times are used most
* Sent preliminary results to Fontaine and Simona
* Made meeting points for tomorrow
* Researched arcpy
* Researched use of UVA Rivanna

July 9 (0730-1530)

* Caught up on emails
* Sent Simona a visual of the grid
* Finished hashtable
* Created objects to store all information
  + Origin and destination
  + Time
  + Trips
* Asked Simona for waypoint to path code
* Research numpy
* Research arcpy

July 8 (0800-1600)

* hashtable

July 7 (0600-0700) (1100-1400) (2 hr)

July 6 (1215-1315)

July 5, 2019 (1 hr)

July 4 Thursday (1630-1800)

July 3 Wednesday (0630-0830) (1530-1630)

July 2 Tuesday (1700-1900)

July 1 Monday (0630-0730)

June 30 Sunday (1500-1700)

* Lat long od script

June 28 Friday (1200-1300) (1500-2000)

* Lat long OD script

June 26 Wednesday (1200-1300)

* Lat long OD script work

June 23 Sunday (0630-0730)

* Lat long OD script work
* General Notes
  + The average speed can be calculated with the trip data
    - Simona may have been doing it a harder way
    - Have meters of trip, and average speed of trip
  + Trip data does not have start time

June 17 Monday (1100-1600)

* Read through Simona information
* Implemented Simona’s tasks
  + As per ‘ArcPy Instructions.doc’
* Researched Arcpy
  + Classes, functions etc

June 14 Friday (0900-1500)

* Download Simona Python Script
* Download shapefiles for states and VA county’s
* Tried to get ArcGis onto laptop
  + Sort of failed
  + Couldn’t get authorized to open the actual product once it was downloaded
* Worked on OD count code

June 13 Thursday (0730-1500)

* Reviewed objective tree in draw.io
* Brainstorm how to define Origin and destination regions
  + Arbitrary grid
    - Takes away bias
* Meeting notes
  + Includes creating plans for project
* Call HR to sort out I-9 part two form
* Meeting with Fontaine and Simona
* Download shapefiles

June 12 Wednesday (0700-1500)

* Run 2018 analyzation code
* Met with Fontaine
  + I am transitioning to lead on OD path analysis
* Worked on project overview
  + Objective tree
* Met with Goodall
  + He had done a simulation
    - Explained results and process
* Reviewed document sent by Fontaine
* Put Objectives tree into draw.io

June 11 Tuesday (0900-1700)

* Downloaded correct data
  + Without complications
* Organized Fontaine Meeting agenda
* Wrote batch file to analyze data
* Ran program to analyze all data
  + Started running at ~1540~
  + 2017 run was successful
  + 2018 run failed
    - Altered code
* Met with Goodall about probability equation
  + 44hrs before a call per car, not per fleet

June 10 Monday (0800-1300/1430-1730)

* Scheduled meeting with Fontaine
* Updated Simona’s given code to count the XD’s
* Created smaller version of data files to test
* Update bat file to run my code
  + Started, got to work for one file
  + Started to work on making it iterate over a folder of files
    - This would help negate having to copy and paste, and would allow for easy folder manipulation

June 7 Friday (0800-1600)

* Talked to Mo about doing some crash data analysis
* Meeting Plans for Fontaine and Simona
* Probability analysis for Goodall
  + Close, but some weird answer
  + Have a peak probability, then lowers
* Talked to Goodall about helping write a paper on driving cars from afar
  + We set up a program to help with citations
* Met with Simona

June 6 Thursday (0800-1730) +1.5

* Read Systems book
* Practiced Python online
* Met with Goodall
  + Wants to know about how many people need to be on call job in order to have effective handling of automated cars have help when they need it
* Reviewed the documents he gave me
* Did statistical research on the distribution of these calls coming in from the cars
  + Found that it was an exponential distribution
* Did logical analysis on how to find the probability that all the call personnel would be busy at the same time
  + All this work is in yellow legal notebook
* Met with Bowe about time sheet
  + How to do it
  + What I have to do
  + Discussed future logging hours
* Emailed Karen Sleezer about future logging hours

June 5 Wednesday (0700-1600) +1

* Used python script to put the txt files of all the (5) paths into csv format
  + There is a folder for each path
    - This folder contains the txt data, python file for that specific path, and the csv deliverable
* Wrote python script to transform the presentable csv file, into an INRIX query
* Made INRIX query for whole system 17 and 18
* Reviewed Simona’s PowerPoints
* Meeting set up with Simona on Friday
  + Can we do this over the phone?
  + Do we really need to do it at all?
    - Just check the work I’ve done and then adjust from there
* Got email from INRIX saying they saw my request for access

June 4 Tuesday (0730-1600) +0.5

* Create paths that involve the Parkway
* Grab XD data from these paths
  + Wrote sql query for each path
  + Broke this path up into sections
  + Made a txt file for each section of the path
  + Use the script written yesterday to make a csv file
    - This will help with the ordering
      * Ordering is hard in this case because the path is multidirectional
      * Just do best guess for the interchanges
* Unable to login to INREX
  + Used Ram. V. login to learn interface

June 3 Monday (0815-1615)

* Finished UVa employee training
  + PADHR
  + Not on our grounds
  + emergency preparedness
  + Information security awareness
* Clarify with Simona on how to classify GW Parkway based on new formatting
* Added Parkway and 495 express lanes to the parkway system
  + Put in proper format and sent to Simona
* If something went wrong with the formatting (transferring the data all over the place
  + Next plan is to write a script to do it
    - Review SQL queries
    - Get all individual txt files for the separate segments
      * 495 S, N
      * Etc
    - Write script
      * Takes in the txt file
      * Reads into big array
        + Each index is a line
      * Sort the data based on how someone would travel
        + Use startLat or startLong
        + This produces a sorted array
      * Write the data to a csv file
        + Clear the csv of all prior data
        + Only the data needed

XD number

Mile

Create a corridor name

Decide whether it is an AM or PM route

Pkwy will have to do this twice

* Wrote the script
* Made a google map for Simona
  + I guess to see the road boundaries I had chosen
* Tried to login to INRIX RA but was unsuccessful, asked Fontaine for help via email

May 31 Friday (0900-1700)

* Met with Simona in the morning to discuss XD formatting and info
* Formatted links from parkway to 66
  + Found applicable sections of roadway to study
  + Export the xd data for each roadway to txt file
  + Import the xd data, via txt file to excel and format
* Got work ID from Bowe

May 30 Thursday (0900-1700)

* Meeting for paperwork with Ms. Bowe
* 1000 meeting with Simona and Fontaine
* Made sections of Parkway to be used in routing later
  + Used GIS to section off different parts of the road that were of interest
  + Made SQL queries in order to not have to do it all by hand
  + For each section of interest, there is a spreadsheet with the XD sections that are in that total section
  + Only the XD number was of interest, so this information was consolidated