

Daniel Huang, SMU UbiComp Lab, June-August 2016  
Contact: danielhuang74@gmail.com

#### List of files

<a href="#">csv</a>	Alletaev.csv, Anomali.csv, and London.csv are the csv equivalents of the original .dbf files. The other files are just temporary csv files I used while coding and can probably be deleted
<a href="#">figs</a>	BBT graphs, file name for each picture is the cycle ID, I believe. Not every cycle's graph has been generated (you can do it on your own in the BBT Graphs.ipynb file)
<a href="#">BBT Graphs.ipynb</a>	create BBT vs Time graph
<a href="#">Calculate Day of Ovulation.ipynb</a>	calculate day of ovulation based on the three over six rule, compare it to the recorded day of ovulation
<a href="#">Correlation Matrix.ipynb</a>	correlation and scatter matrices
<a href="#">Graph Consecutive Cycles-General.ipynb</a>	graph the consecutive cycles for a participant given her ID
<a href="#">Graph Consecutive Cycles.ipynb</a>	original version that only worked for participant with ID of 9
<a href="#">Intro.ipynb</a>	Introduction to the project (Start here)
<a href="#">Linear Regression-Many Participants?-Folding on each participant.ipynb</a>	Model based on data for many participants (not just one), each participants' cycles are assigned to a unique fold
<a href="#">Linear Regression-Many Participants?.ipynb</a>	Model based on data for many participants (not just one), 10 folds are used (you get similar results as when you fold on each participant, but it's less resource intensive)

<a href="#">Linear Regression-One Participant.ipynb</a>	Model based on data for only one participant
<a href="#">Random Forest-OOB.ipynb</a>	Graph OOB error rate vs n_estimators for a Random Forest Regressor using three different max_features
<a href="#">Random Forest-Process Residuals SDs.ipynb</a>	Graph residuals standard deviation vs n_estimators (the data is read in from an external file random_forest_residuals_sds in the same directory)
<a href="#">Random Forest-SD graph.ipynb</a>	Train Random Forest Regressors on a range from 20 to 80 n_estimators and calculate the SD of the residuals (takes a couple hours to run), the resulting SDs are stored in file random_forest_residuals_sds so you don't have to run it every time
<a href="#">Visualization.ipynb</a>	Minor visualization of the data. This file also provides an example on how to import and process one of the csv data files before you can use it (as is done at the beginning of in every .ipynb file)
<a href="#">alletaev.dbf</a>	
<a href="#">ALLETAEV.TXT</a>	
<a href="#">ANOMALI.DBF</a>	
<a href="#">daniel_utils.py</a>	utilities file
<a href="#">figure_1.png</a>	scatter matrix (unhelpful)
<a href="#">london.dbf</a>	
<a href="#">LONDON.TXT</a>	
<a href="#">london_datetime.csv</a>	
<a href="#">London_ReadMe.pdf</a>	
<a href="#">random_forest_residuals_sds</a>	file with the residuals for various Random Forest Regressors trained with 20 to 80 n_estimators (this takes a

	few hours and is done in Random Forest-SD graph.ipynb), the file is used in Random Forest-Process Residuals SDs.ipynb to create a graph (see that file description for more details)
<a href="#">VARALLETAEV.pdf</a>	
<a href="#">VARLONDON.pdf</a>	