Overview of Files in the ChitwanABM

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> ### *Note*
>
> This file describes all the code that is necessary to run the ChitwanABM. You may also have files that end in .pyc. These files can be ignored - they are automatically generated by Python when you run the model.

Initialization code:

- *data_preprocess.R* - Used to produce initialization data for the model from restricted access Chitwan Valley Family Study (CVFS) data.

- *initialize.py* - Produces the initial agents for the model from the output of data_preprocess.R`.

Main model code:

- *__init__.py* - Defines ChitwanABM module (required for Python). Also loads the default parameter values, using code from the PyABM toolkit.

- *agents.py* - Defines the agent classes used in the ChitwanABM. Also defines demographic events associated with those agents, and contains classes for tracking land use within the model.

- *batch_run.bat* - Used to more conveniently run a set up ABM runs (of the same scenario).

- *calc_NBH_stats.R* - Plotting code used after running the model to plot results at the neighborhood level.

- *modelloop.py* - Contains the main model loop. This loop is called from the code in *runmodel.py*, and defines the order in which events occur, and also contains code to track model results for later plotting and analysis.

- *rcparams.default* - Contains the default parameter values for each parameter in the model, for possible combinations of sub-models. Each model run does not necessarily use each parameter listed in this file. The parameters used in each model run are dependent on the chosen combination of sub-models. The sub-models to use in a given scenario are chosen based on the values in this file. For example, the value the 'model.parameterization.marriage' variable is set to in this file determines whether the 'simple' or 'yabiku2006' marriage timing parameterization will be used.

- *runmodel.py* - The main interface to the ChitwanABM. This is the executable file used to initiate a model run.

- *statistics.py* - Contains statistics functions that implement empirical results for usage in the model.

Plotting files (to process model run results)

- *plot_fw_results.R* - Plots the fuelwood usage results from a single model run.

- *plot_LULC.R* - Plots the land-use and land-cover results at the neighborhood level from a single model run.

- *plot_LULC_batch.R*- Plots aggregate statistics on land-use and land-cover from a set of model runs of a single scenario.

- *plot_pop.R* - Plots population data at the neighborhood level (births, marriages, deaths, migrations) from a single model run.

- *plot_pop_batch.R* - Plots aggregate statistics on population data at the neighborhood level (births, marriages, deaths, migrations) from a set of model runs of a single scenario.

- *plot_psns_data.R* - Plots individual-level statistics on population data from a single model run.

Documentation

- *INSTALLATION.txt* - A file with information on how to install the ChitwanABM model.

- *FILES.rst*- This file, a reStructuredText format file listing the files

- *FILES.PDF*- The PDF version of this file.

- *gpl.txt* - The GNU General Public License (GPL) text file.

- *README.txt* - A readme file with general information about the ChitwanABM.

- *USAGE.txt* - A file with information on how to run the ChitwanABM (work in progress).

Work in progress

These files are not yet ready to be used, and some may be removed. Metadata on these files will be added after they are complete.

- *generate_agents.R*

- *install.py*

- *install.R*

- *setup.py*

- *test.py*

- *test.R*