Component Specification for Death Simulator

Raw Data

CDC Data: 19 raw .txt exports

BLS .csv data

Data Wrangling

mortality_combining_cleaning..ipynb cleans data and predicts missing population sizes for age 85+ via linear regression and outputs 'deaths_age_gender_race_mechanism_cause.csv`

pop_fat_join.ipynb cleans the data and outputs 'occupational_hazards_data.csv'

probability_converter.ipynb

Finishes data cleansing of the BLS data by limiting to the highest hierarchy level of occupation,

convert CDC data into annual probability of death by age, gender and race. Output is 'annualDeathProbs_age_gender_race.csv'

Convert occupation data into ndexed likelihood of death by occupation. Output is 'job_indexed_likelihood.csv'

convert CDC data into the annual probability of each mechanism and cause of death, given that death occurs for a specified age, gender, and race. Output is 'annualCauseofDeathProbs_age_gender_race.csv'

Death Simulator

Users' inputted occupation modulates annual death probabilities

Roll for death in a year

Yes

Roll for Day

Yes

Roll for mechanism and cause of death

No

No

Interactive User Interface

User provides state, age, gender, race, occupation

User receives Pre-Death Certificate .pdf

Pre-Death Certificate .pdf is created with date, mechanism, and cause of death