# Junkyu Park

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## Skills

- Data analysis
  - data manipulation: dplyr, tidyr, pandas
  - data visualization: ggplot2, matplotlib.pyplot, seaborn
  - regression analysis: R functions and packages, statsmodels.api
  - statistical computations: manually written functions, numpy, scipy
  - comprehension: able to find references and read documentations of external packages
- Technical
  - Markdown/R Markdown: able to form documentations
  - Git and git repositories: git commands, GitLab, GitHub
  - Some knowledge of HTML and CSS: currently maintaining joon3216.github.io
  - SQL: able to write complex queries and subqueries
  - Python and R
    - \* able to utilize external packages for modeling, computations, and visualizations
    - \* able to develop a simple package and upload to archives and git repositories
- Language: English, Korean

## **Projects**

### Package development (work): estime2 package in Python

- built a prototype of the program that will replace the current system used by Demography Division that fixes negative end-of-period populations in various regional-level population tables
- incorporated various methods to fix a negative end-of-period population and evaluation metrics for each of those methods

#### Package development (work): sprcr package in R

- included the following functionalities to the package:
  - plotting kernel density estimates and empirical cdfs based on different colour and panel groups
  - smoothing out data points based on constraints and various configurations
  - performing k-fold cross-validation in the smoothing process

# Experience

Methodologist (MA-01) Statistics Canada Jan 2020 - Present · 1 yr 3 mos Ottawa, ON

- wrote documentations on various topics and ideas in statistics and computations
- conducted analysis and modeling requested by clients and/or senior methodologists
- developed, and maintaining, packages written in R and Python

### Education

H.B.Sc.: statistics specialist and math minor University of Toronto

2019