

# Junkyu Park

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<https://joon3216.github.io/>

## 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](https://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  
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 in R and Python

## Education

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

Jun 2019