Ji-Eun Park

+1 (917)-601-6510 | jip2008@med.cornell.edu | ⌂ jennprk.github.io | ⚙ jennprk | 🔗 ji-eun-park

Educations

University of North Carolina - Chapel Hill
Doctor of Philosophy in Biostatistics

Chapel Hill, NC
Aug 2019 -

Weill Cornell Medicine, Cornell University
Master of Science in Biostatistics and Data Science

New York, NY
Sep 2017 - Dec 2018

Ewha Womans University
Bachelor of Science in Economics

Seoul, Korea
Mar 2013 - Dec 2016

University of California, Davis
Student Exchange Program

Davis, CA
Sep 2014 - Dec 2014

Research Experiences

Researcher
Environmental Health and Engineering, Johns Hopkins University

Baltimore, MD (remote)
May 2019 - Present

- Determine the effect of air pollution PM2.5 on brain function based on mice transcriptome and epigenome
- Perform differential expression(DE) gene analysis, GO term analysis, GSEA

Research Assistant
Department of Health Policy & Research, Weill Cornell Medicine

New York, NY
Aug 2018 - Jun 2019

- Determined the subpopulations with higher risk of stroke after myocardial infarction (MI) using causal inference methods
- Used Cox models to identify effect modification by demographics, stroke risk factors e.g. hypertension, diabetes, etc., and Charlson comorbidities

Research Assistant
Department of Health Policy & Research, Weill Cornell Medicine

New York, NY
March 2018 - Present

Project 2

- Microbiome research based on mouse fecal samples DNA extraction and cutaneous human breast microbiome samples
- Aim to determine the effects of aVISTA, Cyclophosphamide and Radiation Treatment effects on human and mice microbiome to understand the treatment effects on breast cancer.
- Use DADA2 and perform diversity analysis, differential abundance analysis

New York, NY
Mar 2018 - Feb 2019

Project 1

- Develop a comprehensive workflow for microbiome data analysis based on our analysis
- Analyze 16S rRNA gene sequence data from a study to understand the effect of fructose consumption on mouse gut microbiome
- Perform data preparation and generate phylogenetic trees from data and explore various methods for alpha/beta diversity, differential abundance analysis and classification/clustering

Leading Project Researcher[1]   New York, NY

Department of Health Policy & Research, Weill Cornell Medicine   Sep 2017 - Aug 2018

- Advisor: Dr. Davide Risso
- Compared clustering methods for analyzing Single-Cell RNA Sequencing Data
- Performed data processing, simulation based on gamma-poisson distribution, normalization, dimensionality reduction (PCA) with R packages *scater, splatter, clusterExperiment, etc.*
- Compared among traditional and sequential K-means/PAM based on Adjusted Rand Index

Teaching Experiences

Teaching Assistant, Statistical Learning (Master level)   New York, NY

Department of Healthcare Policy & Research, Weill Cornell Medicine   May 2018 - Present

- Lead labs sessions for 29 students with course-related realization with R
- Hold regular office hours regarding questions on course materials, assignments and academic concerns

Teaching Assistant, Foundations Biomedical Applications (Master level)   New York, NY

Department of Healthcare Policy & Research, Weill Cornell Medicine   February 2018 - May 2018

- Lead labs sessions for 21 students with course-related realization with R
- Hold regular office hours regarding questions on course materials, assignments and academic concerns

Teaching Assistant, Categorical & Censored Data Analysis (Master level)   New York, NY

Department of Healthcare Policy & Research, Weill Cornell Medicine   Nov 2018 - Present

- Lead labs sessions for 25 students with course-related realization with SAS
- Hold regular office hours regarding questions on course materials, assignments and academic concerns

Publications & Technical Reports

Publications - Submitted

- Josephine Kang, Karsten Pilones, Camille Daviaud, Jeffrey Kraynak, Maria Rodriguez-Ruiz, Xi Kathy Zhou, Ji-Eun Park, Chenghuiyun Xu, Sandra Demaria, Silvia Formenti, Submitted, **Vista Blockade Immunotherapy in a Multi-Modal Approach to Triple Negative Breast Cancer (TNBC) in Mice and Impact on Microbiome**,*American Society for Radiation Oncology (ASTRO)*

Publications - In Preparation

- Daeryong Kang, Changsoo Kim, Minyoung Kim, Jeongdong Lee, Ji-Eun Park, Jeong Bae Park, In preparation, **Sodium intake and its effects on hemodynamic and metabolic risk development**

Technical Reports

- Ji-Eun Park, Yitong Wang, Davide Risso, **Comparing Methods for Analyzing Single-Cell RNA Sequencing Data**, unpublished technical report, Department of Health Policy & Research, Weill Cornell Medicine, 2018 (`https://github.com/jennprk/ClusteringMethods_Single-cell_RNASquencing`)[1]

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[1]Presentation/Technical Report of this project won the "Best Capstone Project Award" in the Department of Healthcare Policy & Research, Weill Cornell Medicine

Technical Skills

Programming	R, SAS, mySQL, Python, LaTeX
Database Management	SQL Server, MS Access
Parallel-computing	Sun Grid Engine (SGE)

Honors & Awards

2018   **Best Capstone Project Award,** Weill Cornell Medicine, Graduate School of Medical Sciences   New York, NY

2016   **Honors Scholarship,** Ewha Womans University   Seoul, Korea

2015   **Honors Scholarship(top 6%),** Ewha Womans University   Seoul, Korea

2014   **Student Exchange Program Scholarship at University of California, Davis,** Ewha Womans University   Seoul, Korea

2013   **Honors Scholarship,** Ewha Womans University   Seoul, Korea

Industry Experiences

Internship
Seoul, Korea

Cheil Vascular Research Institute   Jun 2015 - Sep 2015

- Conducted data cleaning of baseline characteristics and risk factors of patients data using Excel
- Performed descriptive analysis of the baseline characteristics of hypertension patients with STATA

Voluntary & Community Activities

Webinar Presenter
New York

Department of Health Policy & Research, Weill Cornell Medicine   November 2018

- Collaborate with 2 staff and 1 faculty member to develop a program introduction webinar as a current student representative speacker

Program Marketing Translator
New York, NY

Department of Health Policy & Research, Weill Cornell Medicine   Jan 2018 - Feb 2018

- Translated the school program marketing materials written in English to Korean

Student Council Member
Seoul, Korea

College of Social Sciences, Ewha Womans University   Mar 2013 - Feb 2014

- Collaborate with 16 staff members to organize campus activities and events

Voluntary Assistant   Seoul, Korea

Cheil General Hospital & Women's Healthcare Center lab   Dec 2011 - Feb 2012

- Managed and transformed physician notes of patients in pregnancy into an electronic data using Excel

Professional Membership

- American Statistical Association (ASA)

- American Heart Association

- American Association for the Advancement of Science