Corey **Brennan**

Computer Science · Statistical Analysis

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Education

Oregon State University — *Corvallis, OR*

B.S. in Computer Science — *Feb 2019 - May 2022*

Columbia University — *New York, NY*

M.P.H. in Epidemiology & Applied Biostatistics — *Sep 2016 - May 2018*

University of North Carolina — *Chapel Hill, NC*

B.S. in Psychology; B.A. in Peace, War, and Defense — *Aug 2010 - Sep 2014*

Work Experience

NewYork-Presbyterian Hospital — *New York, NY*

Analyst, Transplant Quality and Compliance — *Jul 2018 - Present*

- Analyze and assess patient medical records using R statistical programming to ensure optimal and consistent operation of transplant program.
- Employ R programming and modeling to create meaningful dashboards and visualizations to assist pre- and post- transplant coordinators.
- Mine and abstract requested variables and data sets from patient EMR and other database systems, including a relational database containing data for over 1 million transplants.
- Perform statistical analyses to determine outcomes for donor/recipient characteristics and transplant patient pharmaceutical regiments.
- Develop internal R packages for common methods called across multiple R markdown dashboards.
- Clean and structure medical record data to be analyzed effectively, and generate reports from available data.
- Conduct analyses for and assist in writing manuscripts and abstracts for submission to academic journals and conferences.

Columbia University Medical Center — *New York, NY*

Transplant Outcomes Research Assistant — *May 2017 - Jun 2018*

- Completed analyses for 3 published manuscripts and 3 poster abstracts.
- Utilized predictive modeling, survival analysis, and statistical tests in SAS to investigate kidney transplant patient outcomes.
- Conducted data mining and abstraction from electronic medical records (EMRs) and relational databases.
- Cleaned large data sets to be analyzed using SAS statistical programming and SQL Data Manipulation Language (DML).
- Created and utilized SAS macros and programming to efficiently format data and assess transplant outcomes.
- Performed literature reviews and prepared research manuscripts for submission, generating all data analyses.

Programming Projects

Basic Shell OS: Smallshell

Language: C

Shell that utilizes the Unix process API, signaling, and I/O redirection to allow for both foreground and background processes.

Study Database: Frontend and Backend

Language: Javascript

Frontend employs asynchronous requests via a RESTful API to communicate with node express javascript backend utilizing a mySQL relational database.

Programming Proficiencies & Relevant Coursework

Programming Proficiencies

- **Intermediate:** C++, C, Python, R (tidyverse, shiny, flexdashboard), SAS, SQL (MySQL, PostgreSQL)
- **Basic:** Java, Rust, Tableau, Plotly, Git/Github, MPlus, LaTeX

Selected Coursework

- Accelerated Introduction to Programming, Data Structures, Analysis of Algorithms, Discrete Structures in Computer Science, Computer Architecture and Assembly Language, Web Development, Operating Systems I, Introduction to Databases, Introduction to Computer Networks, Programming Languages: Python, Data Science I

Graduate Thesis (Published)

- **Brennan, C.**, S.A. Husain, K.L. King, D. Tsapepas, L.E. Ratner, Z. Jin, J.D. Schold, and S. Mohan. 2019. "A Donor Utilization Index to Assess the Utilization and Discard of Deceased Donor Kidneys Perceived as High Risk." Clinical Journal of the American Society of Nephrology : CJASN 14 (11).