TAEHOON HA

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WORK EXPERIENCES

STONY BROOK MEDICINE | *Biostatistician (Data Manager, Statistician)* Stony Brook, NY

Building Evidence for Nationwide Adoption of a New Medical Procedure *Nov 2024 - Present*

- Improved emergency airway success rates by developing statistical/ML models with ED physicians and hospital leaders, raising outcomes from the national 80% baseline to 92%.
- Identified key factors driving higher success rates using R-based logistic regression and random forests on five years of clinical data from 3,000+ patients.
- Drove the development of 8 submissions to top-tier medical journals guiding nationwide adoption of the new airway procedure and led hospital policy discussions to expand its use.

COLD SPRING HARBOR LABORATORY | *Biostatistician (Statistics Core Director)* Cold Spring Harbor, NY

Driving $5M NCI Cancer Research Funding through Data-Driven Experimental Design *Sep 2020 - Nov 2024*

- Directed the end-to-end data strategy and cross-lab coordination across five cancer research labs, contributing to securing a $5M federal grant from the National Cancer Institute (NCI).
- Designed and optimized the experimental framework to improve efficiency by 15% and reduced project costs by 20% by tightening resource allocation and eliminating unnecessary operational overhead.
- Created a scalable decision model for future multi-lab proposals by building Python-based statistical and budget forecasts that evaluate feasibility and run sensitivity analyses across varying sample-size and cost assumptions.

Efficacy of COVID-19 Treatment (Phase II Clinical Trial)

- Evaluated Famotidine (common heartburn medicine) for potential COVID-19 repurposing and provided key analytic insights that helped inform decisions potentially avoiding $20-50M in early-stage R&D expenditures.
- Applied regression and survival analyses in SAS and R to analyze clinical trial datasets and quantify treatment effects, identifying patient subgroups with the strongest therapeutic response.
- Coordinated with cross-functional teams at the National Institutes of Health, synthesizing results, aligning stakeholders, and guiding decisions on Famotidine's safety and deployment.

WEILL CORNELL MEDICINE | *Research Assistant - Biostatistics & Data Science* New York, NY

Optimizing Emergency Care in Tanzania using Python and Machine Learning Models *Aug 2019 - Sep 2020*

- Identified the key drivers of survival in severe head-injury cases by developing ML models and performing survival analysis on Tanzanian emergency patient data.
- Determined that completing CT scans within 30 minutes of ER arrival increased survival probability by 20%, making it the most impactful clinical factor.
- Delivered actionable recommendations that helped local clinicians and global health partners reprioritize patient flow and imaging, resulting in faster CT turnaround and improved emergency response efficiency.

EDUCATION

CORNELL UNIVERSITY | *Master of Science, Biostatistics and Data Science* New York, NY

- Academic Excellence (Over 4.0 cumulative GPA) Award *Jun 2019*
- Thesis: Application of a Bayesian Model Averaging Method to Observational Metabolomics Data Analysis

DUKE UNIVERSITY | *Master of Science, Business Analytics (MQM)* Durham, NC *May 2018*

SUNGKYUNKWAN UNIVERSITY | *Bachelor of Business Administration & Quantitative Methods* Seoul, Korea

- Military Service: Republic of Korea Marine Corps (2011 - 2013) *Jul 2017*

TECHNICAL SKILLS

Programming: R, Python, SAS
Database: MySQL, PostgreSQL, Snowflake, BigQuery
Visualization: Tableau, Power BI, Shiny App
Cloud Computing: Amazon Web Services