Shivalika Chavan

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EDUCATION

Columbia University Mailman School of Public Health, New York, NY
M.S., Biostatistics – Public Health Data Science, Expected May 2027
University of Washington, Seattle, WA
B.S., Bioengineering (Data Science) with Honors, Minor in Applied Mathematics, Graduated May 2021
GPA: 3.73

WORK EXPERIENCE

Senior Scientist, Roche
Santa Clara, CA July 2021 – July 2025

- Led quantitative analysis for feasibility studies, including the use of ANOVA and post-hoc Tukey tests and process control charts on high-volume sequencing data, to model product performance.
- Generated critical pre-commercialization insights to support the commercial launch of Axelios SBX technology, directly informing sequencing market fit
- Developed a scalable analysis pipeline in R and SQL to interpret and visualize key performance indicators (KPIs), translating complex results into actionable stakeholder recommendations.
- Presented technical findings and evidence-based recommendations to diverse audiences of up to 100+ colleagues (including product management and research leaders)

Undergraduate Researcher, Neural Engineering & Rehabilitation Design Lab, Univ. of Washington
Seattle, WA January 2018 – June 2021

- Contributed foundational data analysis and interpretation for two peer-reviewed publications investigating post-stroke neural electrophysiology
- Developed comprehensive data analysis and visualization frameworks in Python and MATLAB, including signal processing and statistical analysis for a study focusing on post-stroke neural mechanisms.

Algorithms and Research Engineer, Philips
Seattle, WA June 2020 – September 2020

- Performed secondary data analysis on 50+ real-world clinical cases to evaluate shock efficacy for medical devices (automated external defibrillators), contributing to a post-market study for FDA-regulated devices.
- Reviewed and annotated clinical data from 120+ ventilators and traumatic brain injury cases, supporting research evaluation for pre-hospital measures.

TECHNICAL SKILLS

Modeling/Programming - R, Python, SQL, Git/GitHub, MATLAB, Excel
Statistical Methods - Descriptive Statistics**,** Hypothesis Testing, Process Control Charts
Machine Learning - Regression Analysis, Principal Component Analysis, K-means clustering

PUBLICATIONS

Ip Z, Rabiller G, He JW, **Chavan S**, Nishijima Y, Akamatsu Y, Liu J, Yazdan-Shahmorad A. *Local field potentials identify features of cortico-hippocampal communication impacted by stroke and environmental enrichment therapy*. J Neural Eng. 2021 Jul 6;18(4):10.1088/1741-2552/ac0a54. doi: 10.1088/1741-2552/ac0a54. PMID: 34111845; PMCID: PMC8542391.

Griggs DJ, Bloch J, **Chavan S**, Coubrough KM, Conley W, Morrisroe K, Yazdan-Shahmorad A. *Autonomous cage-side system for remote training of non-human primates*. J Neurosci Methods. 2021 Jan 15;348:108969. doi: 10.1016/j.jneumeth.2020.108969. Epub 2020 Oct 8. PMID: 33039414; PMCID: PMC8384435.