Malavika Mampally

Eligible for F1-OPT – No sponsorship for 3 years

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Education

University of North Carolina at Chapel Hill – **M.S. Statistics and Operation's Research** *08/2023 – 05/2025*
University of Mumbai – **B.S. Statistics** *06/2019 – 07/2023*

Experience

Insights Analyst – AI Research *Jan 2025 – Feb 2026*

School of Data Science and Society, UNC

- Conducted literature reviews to synthesize existing evidence on AI deployment in healthcare, informing evaluation frameworks and producing a co-authored peer-reviewed research paper on multi-level human-LLM alignment (Link:ArXiv)
- Led statistical benchmarking study analyzing healthcare survey response patterns across large-scale datasets, developing standardized measurement metrics and evaluation reports to assess AI readiness for clinical stakeholders
- Applied multivariate statistical and analytical techniques to model sensitive health topic responses, performing A/B testing and data visualizations to surface actionable insights on bias patterns for cross-functional audiences

Data Analytics Consultant – Program Evaluation *Jan 2025 – May 2025*

NC Translational and Clinical Studies Institute, UNC Health

- Designed and built the first end-to-end evaluation framework for a patient recruitment program, transforming an unmonitored process into a repeatable measurement workflow with standardized KPI definitions, interactive dashboards, and written reports for leadership and clinical stakeholders
- Collected and analyzed both quantitative and qualitative data through surveys (Qualtrics) and longitudinal trend analysis, reducing operational delays by 40% and producing metric reports that informed resource reallocation decisions across clinical operations
- Demonstrated 285% improvement in strategy adoption rates by applying statistical testing and delivering ad hoc evaluation analyses; prepared written materials presenting findings, implications, and recommendations to program leadership

Data Analyst Intern *Jun 2022 – Aug 2022*

Future Generali India Insurance Co.

- Reduced data processing time by 30% by streamlining quarterly reporting workflows across 10+ insurance lines, managing large-scale datasets (100K+ records) with validation checks ensuring data accuracy and compliance
- Identified key risk factors driving premium variation through regression analysis on policyholder data, authoring reports with findings that enhanced pricing strategies and informed underwriting team decision-making

Projects

Fitness Program Performance Evaluation (R, Tableau)

- Conducted program evaluation on outcomes across 180+ variables and 1,900+ participants, defining performance metrics, building automated dashboards, and preparing written summaries to inform program design decisions
- Designed A/B tests across participant segments (age, gender, program type) and delivered ad hoc reports with data visualizations supporting evidence-driven resource allocation and continuous improvement

Life Expectancy Prediction Model (R)

- Built end-to-end predictive model for country-level health outcomes from WHO data using LASSO, Ridge, and PCA regression with a full model validation pipeline
- Interpreted and communicated model results and global health outcome drivers to both technical and non-technical audiences through written reports and visualizations

NBA Game Spread Prediction (Python)

- Engineered novel features and built ensemble ML models achieving 96% accuracy in predicting game spreads; ranked #1 among 14 teams for lowest prediction error
- Applied feature engineering, model selection, and cross-validation techniques to optimize predictive performance on structured data

Technical Skills

Languages: Python (pandas, scikit-learn, PyTorch, seaborn), R (tidyverse, Shiny, ggplot2), SQL (query optimization, data extraction), MATLAB
Tools: Tableau, Power BI, Git, Docker, REDCap, Qualtrics, Microsoft Forms, Microsoft Office – Word, Excel, PowerPoint
Methods: Program Evaluation, Evaluation Design, Measurement Frameworks, Data Collection (Quantitative & Qualitative), Survey Design, Statistical Modeling, Regression, A/B Testing, Data Visualization, Dashboard Development, Machine Learning, Report Writing & Technical Communication