

ABHIRAV DHIREN LANDE

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Education

Doctor of Philosophy in Biostatistics — <i>Minors: Causal Inference, Computer Science</i> <i>Indiana University, Bloomington</i>	August 2025 – May 2029 <i>Bloomington, IN</i>
Master of Science in Statistics (Statistical Science) <i>Indiana University, Bloomington</i>	August 2023 – May 2025 <i>Bloomington, IN</i>
Master of Science in Data Science — <i>Specialization: Big Data Systems</i> <i>Indiana University, Bloomington</i>	August 2021 – May 2023 <i>Bloomington, IN</i>
Bachelor of Technology in Mechanical Engineering <i>Vishwakarma Institute of Technology</i>	August 2017 – June 2021 <i>Pune, Maharashtra, India</i>

Technical Skills

Programming Languages: Python, SQL, R, SAS, STATA

Database Management: Microsoft SQL Server, NoSQL, Microsoft Excel, PostgreSQL

Data Visualization: Tableau, PowerBI

Cloud Technologies: Amazon Web Services (S3, EC2, Transcribe, Redshift, Glue), Apache (Airflow, Spark)

Work Experience

Graduate Research Assistant <i>Indiana University, Bloomington</i>	September 2024 – Present <i>Bloomington, IN</i>
- Synthesized findings from 25+ NHATS-based studies to define cohort inclusion criteria and analytic strategy for a longitudinal ADL/IADL analysis - Processed longitudinal NHATS survey data (18,000+ participants; 13 waves) using R, producing analysis-ready datasets - Conducted exploratory and descriptive analyses in R to characterize assistance trajectories and finalize analytic cohorts - Derived 20+ variables using Rasch (IRT) modeling and literature-based methods improving and simplifying analysis - Manuscript for descriptive paper in progress and working on formulating causal regression analyses	
Research Data Assistant <i>Indiana University, Bloomington</i>	September 2024 – July 2025 <i>Bloomington, IN</i>
- Built Extract-Transform-Load (ETL) pipelines for datasets like healthcare claims data (MarketScan), prescription drug consumption (SDUD), and standardized medication vocabularies (RxNorm), improving data accessibility for researchers and saving on average 20 man-hours of data engineering per project - Developed R packages for these ETL pipelines, enabling adoption by researchers without any prior workflow familiarity - Developed a weighted logistic regression record linkage model incorporating multiple string similarity metrics to merge OpenAlex and IPEDS datasets under inconsistent institutional identifiers (abbreviated vs canonical names), achieving an F-1 score of 0.61, Precision of 1, and Recall of 0.44 on a highly imbalanced dataset	
Data Science Research Intern <i>Vishwakarma Institute of Technology</i>	February 2021 – May 2021 <i>Pune, Maharashtra, India</i>
- Conducted qualitative research to explore the direct and indirect effects of socio-economic factors on healthcare services - Performed exploratory data analysis (ArcGIS), correlation testing, and hypothesis testing to verify the effects of the selected socio-economic factors and weather on health and health services in over 100,000 villages in India - Created a Tableau dashboard for tracking disease occurrence in Maharashtra, India, which facilitated the targeted allocation and distribution of vaccines to the areas in greatest need	

Projects

Internet Use and Caregiving Intensity Trajectories After Myocardial Infarction in Older Adults

- Analyzed 3,280 longitudinal observations from 1,105 older adults in the NHATS dataset to study post-MI caregiving needs
- Built linear mixed-effects models to estimate changes in monthly caregiving hours over time
- Found that caregiving intensity increased by 8% per follow-up period, on average, after myocardial infarction
- Identified that internet users experienced a significantly slower increase in caregiving hours, with the strongest effect among individuals with smaller caregiver networks
- Conducted data preprocessing, transformation (Box-Cox/log), model diagnostics, and visualization of interaction effects in R (lme4, lmerTest)