DENIS OSTROUSHKO

EDUCATION

2024 | 2022

University of Minnesota School of Public Health

MS Biostatistics

Minneapolis, MN

2019 | 2015

University of Minnesota - Morris

BA Mathematics, Statistics *(Double Major)*

Morris, MN

INDUSTRY EXPERIENCE

Present | June 2024

Sr. Healthcare Analyst

Medica

Minneapolis, MN

- Built predictive models to estimate recapture probability of HCCs for ACA and Medicare members, enabling targeted risk adjustment efforts. Currently leading development of interactive dashboards to monitor predicted vs. observed recapture outcomes in real time.
- Engineered methodology to allocate HHS transfer payments at the member level, creating a foundation for individualized profitability analysis. Used derived values to identify high-impact members for outreach and optimize revenue in ACA risk adjustment strategy.
- Designed and deployed a machine learning pipeline to forecast outcomes of chart review projects, including expected HCC yield and risk score increase. Integrated predictions into financial modeling to support budgeting, prioritization, and strategic investment in retrospective review initiatives.

August 2023 | June 2021

Healthcare Analyst II

Medica

Minneapolis, MN

- Led evaluation of a Transition of Care Program using Cox regression to estimate average treatment effect, translating clinical outcomes to financial impact. Proposed targeted improvements through subgroup analysis, estimating $200K (15%) in annualized value.
- Improved hospital readmission risk prediction by developing LASSO logistic regression and random forest models in R. Boosted predictive performance by 17% in AUC over previous production model.
- Designed a causal impact study using difference-in-differences with propensity score matching. Estimated variance via bootstrap and performed power analysis to guide next steps in program monitoring and scaling.

June 2021 | June 2019

Healthcare Analyst I

Medica

Minneapolis, MN

- Automated actuarial completion factor models in SAS/SQL, reducing prediction error by 35% and cutting delivery time from several days to under three hours.
- Advised cross-functional teams on ad hoc analyses, statistical inference from small samples, and cohort definitions to support affordability initiatives.
- Conducted medical cost and utilization trend analyses to support strategic planning. Created executive-ready presentations featuring ggplot-based visualizations, statistical insights, and narrative summaries of observed trends.

CONTACT INFO

+1-612-528-1163

denisostroushko1@gmail.com

LinkedIn Profile

denisostroushko1.github.io

github.com/denisostroushko1

TECHNICAL SKILLS

- R/Rstudio
- Python
- SAS/SQL
- Snowflake
- Git
- AWS S3

ANALYTICAL SKILLS

Frequentist and Bayesian statistical modeling

Predictive analytics and uncertainty quantification

Time-to-event (survival) and correlated outcomes modeling

Healthcare economics and cost-effectiveness analysis

Monte Carlo simulations and statistical resampling methods

DATA SCIENCE SKILLS

End-to-end data pipelines in `R` and `Python`, from raw data to reports, apps, and predictive models

`AWS S3` integration for secure storage, API-based data exchange, and scaleable project workflows

`Snowflake` integration for cloud-native data processing and compute-efficient modeling

Automation of data collection pipelines using `GitHub Actions` and scheduled workflows

Document powered by `pagedown`
Source code in Git

Last updated on 07/02/2025

ACADEMIC RESEARCH EXPERIENCE

May 2024 | August 2023

Graduate Research Assistant

University of Minnesota, Division of Biostatistics — Minneapolis, MN

Data Integration Predictive Methods for AD Identification

- Developed a machine learning pipeline to identify key predictors of Alzheimer's Disease (AD) across multiple -omics data types (e.g., genomics, proteomics).
- Applied SIDA, a novel data-integration method, to perform multi-view feature selection and infer biologically relevant AD biomarkers.
- Demonstrated that integrating multiple -omics sources improved classification AUC by 10–20% over single-view models.

PUBLICATIONS

Sandra E Safo PhD, Thierry Chekouo PhD, Denis Ostroushko, et al.

A score based on MRI imaging variables can predict time to moderate progression in Mild Cognitive Impairment: multimodal data integration study, **The Journal of the Alzheimer's Association - Under Review** , 2025

Stephen Vincent Burks PhD, Jon Eugene Anderson PhD, Denis Ostroushko, et al.

The Pre-Registry Commercial Driver Medical Examination: Screening Sensitivity and Certification Lengths for Two Safety-Related Medical Conditions

Journal of Occupational and Environmental Medicine, 2020. 10.1097/JOM.0000000000001816

PERSONAL PROJECTS

Present | April 2023

Interactive Analysis of Soccer Data

- Built a ShinyApp to explore player-level soccer data from FBRef.com, featuring interactive tables, charts, and similarity metrics.
- Automated daily data collection using `GitHub Actions` and stored historical data in `AWS S3` for reproducibility and scale.
- Implemented custom distance metrics to compare players across seasons using high-dimensional performance features and visualized similarities with `plotly`.

Present | April 2023

Amateur Soccer Team Performance Tracking

- Manage and organize Knights, an amateur soccer team competing in the Minnesota Recreational Soccer League (MRSL).
- Collect and publish match stats each season using a custom-built `ShinyApp`, with goal-scoring data updated and visualized in real time.
- Previous years: 2023, 2024, 2025