Saya R. Dennis

Email: sayarenedennis@gmail.com • (773) 633-0481 • Chicago, IL
GitHub: https://github.com/sayadennis • Personal Website: https://sayadennis.github.io/

EDUCATION

- Ph.D. in Biomedical Informatics, Northwestern University   *Sep 2019–June 2024 (Expected)*
- B.S. in Environmental Sciences and Ecology, University of Tokyo   *Apr 2012–Mar 2017*

RELEVANT SKILLS

- Programming languages: Python, bash, SQL, R, (proficient) Java, Perl (basic)
- ML tools: Scikit-learn, PyTorch, Tensorflow, Dask
- Software programming tools: Git, Google Cloud Platform (GCP), Docker
- Bioinformatics: genomic data processing, feature engineering, ML modeling, and interpretations
- NLP: Oncology/pathology free-text notes text mining, cleaning, and processing
- ML/DL implementation: model design, selection, training, optimization, evaluation, interpretation

PROFESSIONAL EXPERIENCE

Doctorate Researcher, Feinberg School of Medicine, Northwestern University   *Sep 2019–present*
- Implemented ML/DL models and data processing pipelines on large-scale (30+TB) biomedical data by utilizing parallelization and GPU computing (2 publications, 1 conference presentations)
- Collaborated closely with 5+ physicians to consult and address their ML/DL research needs
- Streamlined knowledge-sharing for 10+ team members by data & compute protocols
- Converted complex clinical data to machine-readable formats by reconciling longitudinal records with duplicate or inconsistent contents
- Shared 5+ generalizable ML/DL pipelines on public repositories for fellow researchers

HPC Research Computing Consultant, Northwestern University IT   *Jan 2022–present*
- Consulted researchers to identify and manage appropriate hardware and software resources to facilitate their computational workflows on Northwestern's HPC
- Created tutorial videos to help new users navigate the HPC via the bash shell
- Surveyed the needs of ML/DL researchers to increase accessibility to the GPU infrastructure

Machine Learning Summer Associate, Tempus Labs, Inc.   *June 2022–Sep 2022*
- Developed ML models to predict the onset of 4 different types of cancer using structured EHRs and demonstrated their value through statistical evaluations
- Refined the data processing pipeline by experimentation of 30+ combinations of parameters
- Initiated an improved method for identification of diagnosis time point, eliminating data leakage
- Proposed a novel sampling approach to alleviate issues of class imbalance and data availability
- Communicated research findings in team meetings

Teaching Assistant, Statistics and Data Analysis for Life Science, Northwestern University   *Sep–Dec 2021*
- Guided 40+ students through statistical concepts and coding problems by adapting to their varying levels of experience
- Reported the students' needs to the course instructor to improve course material

Research Technologist, Northwestern University   *Apr 2017–Jun 2019*
- Troubleshooted experimental assays by identifying the issues and providing alternatives
- Trained 2 new team members for reagent management and technical assays
- Maintained and managed communal resources such as reagents and supplies used by 10+ colleagues

LEADERSHIP EXPERIENCE

President, Japanese Graduate Student Association in the United States   *Apr 2020–present*
- Educated aspiring students looking to pursue a graduate degree abroad by coordinating semi-annual information sessions with 30+ presenters and 200+ participants
- Communicated closely with sponsors to ensure and negotiate continued financial support for 2 years
- Adapted a previously in-person information session to a fully virtual format during the pandemic

Service Chair, Graduate Women Across Northwestern   *Sep 2021–present*
- Raised awareness of the needs of marginalized women by holding educational book clubs
- Facilitated discussions about marginalization between students from diverse backgrounds