KENDALL ALEXANDER REID

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EDUCATION

Johns Hopkins University — Baltimore, MD
M.S., Bioinformatics — Fall 2024 - Summer 2026

University of Maryland — College Park, MD
Post-baccalaureate, Biology and Chemistry — 2021 - 2024

Rutgers University — New Brunswick, NJ
Post-baccalaureate, Computer Science — 2018 - 2019

Rutgers University — New Brunswick, NJ
B.A., Mathematics and Economics — 2013 - 2017
Summa Cum Laude
Thesis: *A High-Frequency Methodology for Studying Sector Volatility Transmission*
Academic advisor: *Xiye Yang*
Awards: *Henry Rutgers Scholar Award for outstanding research paper, John C. Daniels award for outstanding achievement in economics, Milton Friedman Distinguished Scholar*

RESEARCH AND WORK EXPERIENCE

Johns Hopkins University — Baltimore, MD
Programmer Analyst, Epidemiology — June 2024-Present

- Built agent based simulation library powered by dask that allows fast, parallel prototyping of HIV population dynamics increasing speed 10000x over the previous implementation.
- Implemented a standard coding environment and procedures across the team, reducing bugs and improving efficiency.
- Coauthored paper using HIV simulation library to forecast the impact of BMI intervention on diabetes outcomes.

Children's National Medical Center — Washington, DC
Research Assistant, Orthopedic Surgery — May 2022-June 2024

- Coordinated a cross disciplinary health informatics investigation exploring trends in hospital throughput across age resulting in presentation to the executive leadership team.
- Coordinated the Osteogenesis Imperfecta Longitudinal study, ensuring accurate and precise data collection from 50 patients.
- Initiated an industry-sponsored drug trial for Setrusumab aiming to reduce fracture risk in patients with Osteogenesis Imperfecta.

- Inherited and oversaw the completion of drug trials for Burosumab, a drug treatment for cutaneous skeletal hypophosphatemia syndrome. Coauthored journal research paper currently in review, and poster presented at Children's Research and Innovation Week.
- Initiated and oversaw research projects for current medical students performing Single Nucleotide Polymorphisms on muscle phenotype data, resulting in presentation at Orthopedic Research Society.

Productivity Industries San Francisco, CA
Data Scientist, Computer Vision and Natural Language Processing January 2019-January 2021

- Combined state-of-the-art research in the creation of a document parsing algorithm surpassing previous industry and academic benchmarks.
- Collaborated with backend and front-end engineers to ensure that the results of the deep learning algorithm were processed quickly, efficiently, and displayed properly to the customer.
- Created a continuous integration cloud framework for training, testing, and deploying deep learning models.
- Managed the technology road-map, stakeholder expectation, and delivery of data science products.

Iunu Seattle, WA
Data Scientist, Computer Vision and Artificial Intelligence June 2017-July 2018

- Developed a deep learning pipeline to measure the amount of plant material in a multi-spectral image and predict total plant yield from a time series of images.
- Grew the data science team from myself to 6 engineers and data scientists, resulting in promotion to team lead.
- Created personal improvement plans for each member of the team to ensure personal growth.
- Collaborated with the other technical team leads in robotics and web development to deliver product.

TECHNICAL

Programming
Python, SQL, LaTeX

Data Science
Pytorch, Tensorflow, PyTorch Lightning, OpenCV, scikit-learn, numpy, pandas, matplotlib, Seaborn, Hugging Face, scverse

Software Development
SLURM, git, Dask, Linux, Docker, SnakeMake, Nextflow, github actions, pytest

Research Topics
Generative Artificial Intelligence, Bioinformatics, RNA-seq Modeling

Research Skills
Grant Writing, Technical Writing

PUBLICATIONS

Published

Tosi, Laura L., Templeton, Kimberly, Pennington, Andrew M., **Reid, Kendall A.**, and Boyan, Barbara D. "Influence of Sex and Gender on Musculoskeletal Conditions and How They Are Reported." The *Journal of Bone and Joint Surgery* 106(16):p 1512-1519, August 21, 2024.

In Preparation

Tosi, Laura L., **Reid, Kendall A.**, Gafni, Rachel I. "Burosumab was safe and effective in a young adult with FGF23-mediated hypophosphatemia due to cutaneous skeletal hypophosphatemia syndrome (CSHS)." In prep for *Journal of Bone and Mineral Research.*

Reid, Kendall A., Goes, Fernando. "A Blended Genome-Exome Polygenic Risk Scoring of Ketamine Response in Patients with Drug Resistant Depression." [working title].

Reid, Kendall A., Luan, Shu, Stein-O'Brien, Genevieve, Colantuoni, Carlo, Caffo, Brian. "Do Wasserstein Critics Outperform Discriminators in Adversarial Deconfounding of Gene Expression Data?" [working title].

Reid, Kendall A., Luan, Shu, Stein-O'Brien, Genevieve, Colantuoni, Carlo, Caffo, Brian. "Evaluating Optimal Transport Based Conditional Decomposition of Gene Expression Data." [working title].

Reid, Kendall A., Kasaie, Parastu. "Advancing Computational Models in Epidemiology: Lessons Learned in Enhancing Research Efficiency and Reproducibility." [working title].

Reid, Kendall A., John, Sheppard. "Are Attention Weights Reliable Indicators of Biological Interaction in RNA-seq Foundation Models?" [working title].

PRESENTATIONS

Conference Presentations

Conference on Retroviruses and Opportunistic Infections. *"The Projected Impact of Post-ART BMI Maintenance on Diabetes Risk: A Modeling Study"* March 2025, San Francisco, California.

Johns Hopkins University Bloomberg Public Health and AI Strategic Endeavors AI Research Day. *"Can Random Forests and Deep Neural Networks Add Something New to Our Understanding of Correlates of Virologic Failure in Adults with HIV? A Multidisciplinary Team and a Comparison of Approaches"* February 2025, Baltimore, Maryland.

Journal of Bone and Joint Surgery. *"Preparing Adults with Osteogenesis Imperfecta to Engage in Research on Access and Quality of Care for Their Rare Disease"* February 2024, San Francisco, California.

Children's Research, Education, and Innovation Week. *"Somewhere to Go for Adults with Childhood-Onset Rare Diseases: A Conversation About How We Can Fill Gaps in Care"* March 2024, Washington, DC.

Children's Research, Education, and Innovation Week. *"Influence of Genetic Variation within the TGF-a and GDF5 gene on Muscle Mass and Strength in Young Adults"* March 2024, Washington, DC.

Orthopedic Research Society. *"Influence of Genetic Variation Within the WNT16 Gene on Musculoskeletal Phenotypes in Young Adults"* February 2023, Dallas, Texas.

Orthopedic Research Society. *"Genetic Variation in VDBP rs4588 Influences Musculoskeletal Phenotypes"* February 2023, Dallas, Texas.

Children's Research, Education, and Innovation Week. *"Three Years' Safety and Efficacy Outcomes of Burosumab in Cutaneous Skeletal Hypophosphatemia Syndrome (CSHS)"* March 2023, Washington, DC.

Children's Research, Education, and Innovation Week. *"Using Virtual Communication for Rapid Dissemination of COVID19 Information to Patients with Osteogenesis Imperfecta"* March 2023, Washington, DC.

Children's Research, Education, and Innovation Week. *"Engaging the Osteogenesis Imperfecta (OI) Community in Patient Centered Outcomes Research"* March 2023, Washington, DC.