Aidan Lakshman

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My Next Role, Software Engineer (Systems/Infrastructure)Starting something new in September, will be announced soon!	New York, NY Sept 2025 – present
 University of Pittsburgh, Graduate Researcher Built a clustering algorithm in C to process graphs with >1B nodes using < 64GB RAM Designed novel algorithms in R to predict gene function from evolutionary signal Researched new ways to infer causal relationships in the presence of missing data Led preliminary research for successfully funded U01 grant 	Pittsburgh, PA Aug 2020 – Aug 2025
 Amazon Web Servies, Software Development Engineer Intern Streamlined AWS account onboarding experience for Research Service Workbench on AWS (SWB) from an error-prone, multi-context process to a one-click workflow Led implementation of SWB's first comprehensive unit testing framework Designed frontend components with React, backend with Node.js and AWS Lambda 	Herndon, VA Summer 2020 & 2021
 Carnegie Mellon University, Robotics Institute Summer Scholar Improved traffic signals by predicting bus behavior with Bayesian modeling in Python Built assistive technology to allow intersections to aid mobility-impaired pedestrians 	Pittsburgh, PA Summer 2018
Education	
PhD University of Pittsburgh , Bioinformatics Research: Designing scalable algorithms to analyze massive genomic datasets	Pittsburgh, PA 2025
BS University of Central Florida, Mathematics <i>magna cum laude</i> , Burnett Honors College, National Merit Scholar	Orlando, FL 2020
Projects	
6502 Computer: Built a 6502 computer on a breadboard, created a 6502 emulator in C to run and debug programs in Assembly, wrote a Forth OS from scratch in 6502 Assembly	
Cloud Storage Server: Built a cloud storage server using Nextcloud on top of a LAMP stack	
Grant Funding	
R Consortium , <i>Infrastructure Steering Committee</i> Funded to become primary maintainer of Biostrings, an open source R package with >1M dow	2024 vnloads per year
University of Central Florida , <i>Burnett Honors College</i> Funded to research novel approaches to incentivize exploration in evolutionary multi-agent s	2018 systems
Publications	
Lakshman, A. and E.S. Wright. "EvoWeaver: Large-scale prediction of gene functional associat	ions from coevolutionary

signals". Nature Communications, 16, 3878 (2025). https://doi.org/10.1038/s41467-025-59175-6 🖸

Lakshman, A. and E.S. Wright. "ExoLabel: Scalable network clustering for massive datasets" (In Preparation).

Skills_

Work Experience

Programming (5+ years): R, C, Fortran 90, Python

Programming (2+ years): C++, C#, Forth, Assembly