

Vennila Ramasubramanian

EDUCATION

University of Pittsburgh, Frederick Honors College August 2020 - April 2024

Bachelor of Science in Computational Biology with a Global Health Certificate | 3.984 GPA

RELEVANT RESEARCH EXPERIENCE

Data Analyst I at Dr. Kostka Lab (University of Pittsburgh) June 2024 – July 2025

- Co-developed a method to estimate metabolic flux with scRNA-seq data
- Coded with R and Python to analyze large transcriptomic and metabolomic datasets
- Utilized Pytorch to incorporate machine learning into bioinformatic pipelines

Research Assistant at Dr. Koes Computational Drug Discovery Lab (University of Pittsburgh) Aug 2022 – Dec 2023

- Investigated potential ligands to Glycine receptors for analgesia and compared them to THC.
- Utilized modeling and simulation tools, Linux, and Python scripting for data analysis and visualization.
- Worked within a team and created/presented multiple posters and presentations.

Summer Institute in Biostatistics and Data Science (SIBS) at Boston University June 2023 - Aug 2023

- Trained in modules in biostatistics, epidemiology, clinical trials, statistical genetics, and infectious disease modeling and trained in SAS, R, and high-performance computing clusters.
- Generated descriptive statistics, analysis of variance, chi-square tests, and multiple linear and logistic regression analysis.
- Conducted a collaborative research project analyzing a real Ukrainian tuberculosis dataset in R which culminated in an oral presentation.

Research Assistant at Dr. Gopal Lab (University of Pittsburgh) July 2021 – Aug 2022

- Explored the impact of influenza on cardiovascular disease.
- Executed wet lab work such as genotyping, PCR, RNA extraction, and Passaging/Treating Cells.
- Performed data analysis using Excel and Prism.
- Co-authored a paper:

Constantinesco, N.J., Srikanth, S., De Vito, L. et al. STAT1 regulates neutrophil gelatinase B-associated lipocalin induction in influenza-induced myocarditis. Sci Rep 14, 11124 (2024). <https://doi.org/10.1038/s41598-024-61953-z>

RELEVANT TEACHING EXPERIENCE

Math Assistance Center Tutor Sept 2023 – April 2024

- Tutored undergraduate students in Calculus 1, Calculus 2 and Algebra.

Undergraduate Teaching Assistant for Computational Biology Aug 2022 – Dec 2022

- Lead office hours every week and assisted students during class.
- Collaborated in creating class projects.

LEADERSHIP AND AWARDS

Shift Leader/Pantry Guide at Pitt Pantry Oct 2021 - Present

Vice President/Programs Chair for Society of Asian Scientists and Engineers July 2022 – Present

University Scholar Apr 2024

Outstanding Freshman Biology Award Aug 2021

Dean's List Fall 2020 – Spring 2024

SKILLS

Programming Languages and Tools: Java, Python, R, SAS, Linux, GitHub

Data Analysis/Visualization: SQL, Excel, Matplotlib, ggplot2, Samtools, BEDtools, Pytorch

Professional Skills: Problem Solving, Teamwork, Organization, Written and Oral Communication