David R. Wagner

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TECHNICAL SKILLS

Python	R	MATLAB	C++	HTML/CSS
Scikit-Learn	TensorFlow	Data Analysis	Machine Learning	Git & GitHub
Keras	Pandas	Computer Modeling	Technical Writing	SQL

EDUCATION

Johns Hopkins University — **Baltimore, Maryland**
Master of Science, Applied and Computational Mathematics — Spring 2024 – Fall 2025
- Cumulative GPA: 4.0/4.0

Purdue University — **West Lafayette, Indiana**
Bachelor of Science, Biological Engineering; Minor in Biotechnology — Fall 2019 – Spring 2023
- Cumulative GPA: 3.99/4.0; *summa cum laude*
- Dean's List and Semester Honors
- Bart and Karen Nelson ABE Scholarship
- Purdue Presidential Scholarship

RELEVANT RESEARCH AND WORK EXPERIENCE

Medicinal Chemistry and Molecular Pharmacology — **Purdue University**
Rational DNA Aptamer Design — Summer 2023
- Assisted with development of DNA aptamer tertiary structure prediction pipeline.
- Enhanced prediction techniques using data collected by another collaborating institution.
- Utilized computer-aided predictions to guide further wet-lab experiments.

Weldon School of Biomedical Engineering — **Purdue University**
Rare Event Modeling in TB Granulomas — Summer 2022 – Fall 2022
- Extended stochastic model to describe drug resistance in complex systems of TB granulomas.
- Developed fast algorithms to combine multiple probability distribution matrices.
- Communicated findings at research symposium and through academic manuscript.

Agricultural and Biological Engineering — **Purdue University**
Characterizing Mutations and Their Effects Using Computational Programs — Spring 2021
- Annotated genome obtained from newly isolated bacteriophage.
- Developed GUI in Python to visualize mutations and effects on resulting gene products.
- Communicated findings both as an abstract and as a presentation for a professional conference.

Agricultural and Biological Engineering — **Purdue University**
Biotechnology Teaching Assistant — Fall 2021 – Spring 2022
- Led discussions with students during class research meetings.
- Assisted students in completing computational biology research project.
- Graded student assignments (including lab notebooks, research papers, and reports).

RELEVANT DESIGN PROJECTS

Applied and Computational Mathematics — **Johns Hopkins University**
Use of Machine Learning to Streamline Optimization of Wave Farms — Summer 2024
- Conducted research to understand shortcomings of previous solutions.
- Employed sophisticated feature engineering to increase predictive power.
- Demonstrated significant advantages and viability over previous methods via a presentation.