

# David R. Wagner

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## TECHNICAL SKILLS

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

## EDUCATION

<b>Johns Hopkins University</b> <i>Master of Science, Applied and Computational Mathematics</i> <ul style="list-style-type: none"><li>Cumulative GPA: 4.0/4.0</li></ul>	<b>Baltimore, Maryland</b> Spring 2024 – Fall 2025
<b>Purdue University</b> <i>Bachelor of Science, Biological Engineering; Minor in Biotechnology</i> <ul style="list-style-type: none"><li>Cumulative GPA: 3.99/4.0; <i>summa cum laude</i></li><li>Dean's List and Semester Honors</li><li>Bart and Karen Nelson ABE Scholarship</li><li>Purdue Presidential Scholarship</li></ul>	<b>West Lafayette, Indiana</b> Fall 2019 – Spring 2023

## RELEVANT RESEARCH AND WORK EXPERIENCE

<b>Medicinal Chemistry and Molecular Pharmacology</b> <i>Rational DNA Aptamer Design</i> <ul style="list-style-type: none"><li>Assisted with development of DNA aptamer tertiary structure prediction pipeline.</li><li>Enhanced prediction techniques using data collected by another collaborating institution.</li><li>Utilized computer-aided predictions to guide further wet-lab experiments.</li></ul>	<b>Purdue University</b> Summer 2023
<b>Weldon School of Biomedical Engineering</b> <i>Rare Event Modeling in TB Granulomas</i> <ul style="list-style-type: none"><li>Extended stochastic model to describe drug resistance in complex systems of TB granulomas.</li><li>Developed fast algorithms to combine multiple probability distribution matrices.</li><li>Communicated findings at research symposium and through academic manuscript.</li></ul>	<b>Purdue University</b> Summer 2022 – Fall 2022
<b>Agricultural and Biological Engineering</b> <i>Characterizing Mutations and Their Effects Using Computational Programs</i> <ul style="list-style-type: none"><li>Annotated genome obtained from newly isolated bacteriophage.</li><li>Developed GUI in Python to visualize mutations and effects on resulting gene products.</li><li>Communicated findings both as an abstract and as a presentation for a professional conference.</li></ul>	<b>Purdue University</b> Spring 2021
<b>Agricultural and Biological Engineering</b> <i>Biotechnology Teaching Assistant</i> <ul style="list-style-type: none"><li>Led discussions with students during class research meetings.</li><li>Assisted students in completing computational biology research project.</li><li>Graded student assignments (including lab notebooks, research papers, and reports).</li></ul>	<b>Purdue University</b> Fall 2021 – Spring 2022

## RELEVANT DESIGN PROJECTS

<b>Applied and Computational Mathematics</b> <i>Use of Machine Learning to Streamline Optimization of Wave Farms</i> <ul style="list-style-type: none"><li>Conducted research to understand shortcomings of previous solutions.</li><li>Employed sophisticated feature engineering to increase predictive power.</li><li>Demonstrated significant advantages and viability over previous methods via a presentation.</li></ul>	<b>Johns Hopkins University</b> Summer 2024
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