

Patrick Phillips

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EDUCATION

University of Rochester

Rochester, NY

B.S. in Computer Science, B.S. in Applied Mathematics, B.A. in Physics

Anticipated May 2021

- **GPA 3.96/ 4.00**, Deans List all eligible semesters
- New York State Academic Excellence Scholarship
- American Council of Engineering Companies (ACEC) Scholarship

TECHNOLOGY SUMMARY

- Python, including many ML and data science libraries such as TensorFlow, PyTorch, Numpy, SciPy, scikit-learn, Pandas, and Gurobi.
- Java, C/C++, SQL, R, MATLAB, HTML, OCaml, Rust embedded programming, Linux/UNIX systems, Git.

COURSES AND PROJECTS

Computer Organization

Machine Learning

Multidimensional Calculus

Computation & Formal Systems

Data Structures and Algorithms

Artificial Intelligence

- ML algorithms from scratch including [backpropagation](#) for a simple feed forward neural net, [expectation maximization](#) for Hidden Markov Models and Mixture of Gaussians, K-Nearest-Neighbors, and [more](#).
- Chess, poker (Texas-Hold 'em), and [connect-4](#) AI players using Monte Carlo tree search and alpha-beta pruning

RELATED EXPERIENCE

Riverside Research

Centreville, VA (*Remote*)

Machine Learning Intern

May 2020 – Present

- Currently involved in remote work on improving satellite scheduling systems using machine learning and mixed integer programming.

University of Rochester

Rochester, NY

Computer Vision and Reinforcement Learning REU

May 2020 – August 2020

- Combined concepts from state of the art reinforcement learning, game theory, and meta learning to develop an agent specialized in two player zero sum games

Technical University of Hamburg (TUHH)

Hamburg, Germany

DAAD Research Scholarship Recipient

May 2019 – August 2019

- Researched the 'informative path planning problem' which is to find a path that maximizes information gain subject to some set of physical constraints.

University of Rochester

Rochester, NY

Computer Science Teaching Assistant

September 2018 – December 2019

- Lead problem sessions and graded assignments for Design & Analysis of Efficient Algorithms (CSC 282)
- Taught fundamentals of CS and helped on Java projects as a lab TA for Intro to Computer Science (CSC 171)

University of Rochester

Rochester, NY

Chemistry and Physics Workshop Leader

September 2018 – December 2019

- Lead weekly problems sessions and recitations for Chemical Principles for Engineers (CHM 137) and Electricity and Magnetism (PHY 122)

CAMPUS INVOLVEMENT

University of Rochester

Rochester, NY

Undergraduate Data Science Council

September 2017 – Present

Ultimate Frisbee Club

September 2018 – Present