

MARK CHRISTOPHER HARRIS, PHD | Data Scientist

(607) 592-6619 | markharris81@gmail.com | [Portfolio](#) | [LinkedIn](#) | [GitHub](#) | Atlanta, GA

SUMMARY

I'm a data scientist with a PhD in applied physics who has also taught high school math. I have extensive experience applying math to the world, including developing and publishing a complex experimental method, applying programming tools to automate work and analyze data, and isolating core concepts to communicate mathematical information to both experts and lay people. I see the big picture and anticipate key details.

SKILLS

Programming: Python, SQL, PySpark, Git, GitHub

Data Tools: Pandas, Numpy, Scikit-learn, Tensorflow, Keras, Matplotlib, Seaborn, BeautifulSoup, Streamlit

Machine Learning Methods: Regression, Classification, Clustering, Time Series Analysis, Neural Networks

Data Science Applications: Computer Vision, Natural Language Processing (NLP), Data Visualization

EXPERIENCE

Data Science Instructor Associate - Contractor, General Assembly, Remote 6/2022 - present

- Assisted instruction of courses covering Python and Data Analysis using Pandas, SQL, and Tableau.
- Communicated with students about their needs and helped them solve problems and understand core concepts.

Physics Teacher, Dunwoody High School, Dunwoody, GA 11/2022 - present

- Filled mid-school year need for a physics teacher, including in-progress AP physics classes.
- Took on responsibility for existing classes, quickly adapting to finish them as strongly as possible.
- Supported students preparing for the AP physics exam after a disrupted school year.

Data Science Immersive Fellow, General Assembly, Remote 9/2021 - 12/2021

- Learned and applied data science and machine learning skills in a 480-hour immersive program, completing 6 projects, 21 lab assignments, and 6 quizzes.
- Completed data science projects include, but are not limited to:
 - Snow Vision Capstone Project: Trained a convolutional neural net to classify images with falling snow.
 - Food Deserts Group Project: Collaborated with two other data scientists using Git to analyze food deserts and health with interpretable regression and classification models and geographical data.
 - Reddit NLP Project: Classified posts acquired via API as being from either the science or futurology subreddits using NLP and multiple classification models, achieving 83.5% accuracy.

Mathematics Teacher, Dunwoody High School, Dunwoody, GA 7/2016 - 5/2021

- Taught high school math classes from Algebra to Multivariable Calculus and sponsored the Math Team.
- Planned syllabus and lessons as sole teacher for AP Calculus BC and Multivariable Calculus courses, identifying key concepts, breaking them into their essential parts, and highlighting connected ideas.
- Collaborated with colleagues to develop lessons and common assessments to identify student needs.
- Organized and supervised student groups of up to 12 on trips to weekend math competitions.

Graduate Research and Teaching Assistant, Cornell University, Ithaca, NY 8/2004 - 8/2014

- [Published a novel biophysical experiment](#) that combined atomic force microscopy, TIRF microscopy, and custom data analysis to measure binding interactions between secretory vesicles and cell membranes.
- Programmed Python script to automate portions of experiment for accuracy and reproducibility.
- Categorized events in over 5 GB data and analyzed their properties with the aid of IGOR Pro scripts.
- Applied statistical analysis to identify a characteristic behavior dependent on experimental conditions.
- Supported courses involving C++ and several other programming, laboratory and physics topics.

EDUCATION

Certificate in Data Science, General Assembly, Remote 9/2021 - 12/2021

Ph.D. Applied Physics, Cornell University, Ithaca, NY 8/2004 - 8/2014

B.S. Physics and B.S. Applied Math, North Carolina State University, Raleigh, NC 8/2000 - 5/2004