

Evan McClintock

Data Science & Software Engineering

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EDUCATION

University of Maryland College Park; Bachelor of Science	May 2024
<i>Computer Science & Physics (dual degree)</i>	3.9 GPA

SKILLS

High-level: Neural networks (training & evaluating), statistical analysis, data exploration, computational physics

Languages: Python, Java, Kotlin, C, R, OCaml, Rust, Ruby

Software and libraries: PyTorch, Pandas, Git, SciKit, Android Studio, MATLAB, NI's LabVIEW, Excel

WORK EXPERIENCE

Experimental Physics Research Intern	June 2023 – May 2024
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Britton Trapped Ion Lab | University of Maryland College Park

Fiber optic signal stability research with Dr. Joe Britton (for application to cost-efficient quantum networking)

- Designed and built experimental setup to control polarized laser signals and quantify noise in 27km buried fiber optic telecommunication cable.
- Coded 2000 lines in Python to automate collection, cleaning, and analysis of polarization data.
- Designed change point detection algorithm and characterized noise processes via Allan Deviation.

Undergraduate Physics Research Fellow

May – August 2022

National Institute of Standards and Technology (NIST), Physical Measurement Laboratory | Gaithersburg, MD

DC Power Calibration with Dr. Richard Steiner (for application to electric vehicle charging)

- Coded LabVIEW scripts and analyzed measurement data to enable ultra-precise power metering.
- Crafted metric to quantify temperature stability data in real time, facilitating automatic measurements.

COURSEWORK

Deep learning: CNNs (designing and interpreting), semantic segmentation, object detection, RNNs, transformers

Natural language processing: N-grams, part-of-speech tagging, context-free grammars, word embeddings

Misc. ML: Bayesian modeling, SVM, random forest, clustering, principal component analysis, kernels

Data science: regression, hypothesis testing, distributions, data scraping, feature engineering

Computational physics: Monte Carlo, differential equation simulation, multidimensional confidence intervals

Statistics: Maximum Likelihood Estimation, various distributions (Binomial, Poisson, Chi-Squared, Gamma, etc.)

Programming: data structures, language paradigms, numerical algorithms, physics simulations

Mathematics: calculus-based statistics, linear algebra, multivariable calculus, differential equations

Physics: statistical thermodynamics, quantum mechanics, quantum tech, electricity & magnetism, classical

AWARDS

University Honors (Honors College)	Fall 2020 – May 2024
UMD Presidential Scholarship	Fall 2020 – May 2024