

I. David Rein

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Education

Duke University - B.S. Computer Science, Minors in Philosophy, Mathematics: Class of 2021

- GPA: 3.8/4.0 (Dean's List x2)
- Linear Algebra, Data Structures and Algorithms, Advanced Multivariable Calculus, Computer Architecture, Intro Data Science, High Dimensional Data Analysis, Advanced Intro Probability, Operating Systems, Machine Learning (graduate level), Deep Learning (independent study, graduate level)
- National Merit Scholar, ACT: 35, SAT: 1550

Research Experience

MedIX REU: DePaul and UChicago: 2019 Summer | **Applied Machine Learning Research Intern**

- Applying ML to retinal imaging

Duke Data+: 2018 Summer - 2018 Fall | **Machine Learning Engineering & Research Intern**

- Operationalized the ML pipeline for the Duke Forge analysis of Electronic Medical Records (EMR)
- Continued work through 2018 Fall, where I developed a fast, parallelized NLP preprocessing toolkit

National Institute of Standards and Technology (NIST): 2017 Summer | **Data Science Intern**

- Applied and Computational Mathematics Division of the Information Technology Lab
- Data analysis/visualization of molecular dynamics simulations of thermoset polymers

Leadership

Co-President of Duke Undergraduate Machine Learning: 2019-2020 (dukeml.org)

- Organized 2018 Duke Datathon with 250+ participants, helped raise and manage \$70k+ budget
- Regularly host speakers for seminars and workshops to engage undergraduates in ML
- Organized 2019 Duke Machine Learning Day

Leader of the 2019 Duke Arete Fellowship (eaduke.org/faq)

- 12-week discussion-based program to introduce 10-20 undergraduates to Effective Altruism

Skills and Activities

- **1st Place at the 2019 ASA Duke DataFest: Best Insight Award**
- **2nd Place: Kenan Institute Ethical Tech Policy Proposal Challenge**
- Nominated by Dr. Robert Calderbank for the Duke Mentorship Program
- Fluent in Python, experience with Java, SQL, R, C++, MATLAB, HTML, CSS
- Very familiar with Scikit-Learn, Pandas, TensorFlow, experience with Dask, Gensim, NLTK, OpenCV
- Wrote a genetic algorithm where virtual agents learned to survive in a competitive ecosystem through fixed-topology neuroevolution: 2016-2017
 - My partner and I wrote an ML library and GUI to monitor agents' progress (and to enjoy watching their battles)