

I. David Rein

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Education

Duke University - Computer Science, Mathematics, Philosophy: Class of 2021

- GPA - 3.822 (Dean's List for Fall 2017)
- Linear Algebra and Applications, Data Structures and Algorithms, Advanced Multivariable Calculus, Computer Architecture, Introduction to Data Science

James Martin High School: Class of 2017

- Unweighted GPA: 4.0, Weighted: 4.7544
- Top 3% in class of ~800
- ACT: 35/36; Math II SAT Subject Test: 800/800
- National Merit Scholar

Research Experience

Duke Data+: 2018

- **Machine Learning Research Intern**
- Operationalized the machine learning pipeline for the Duke Medical Center analysis of Electronic Medical Records (EMR).
- Aided the transition to an Apache Spark distributed workflow by developing tools for Duke Forge researchers
- Natural Language Processing (NLP) - Used doctors' notes to classify premature babies as having growth failure (used SoA word embedding and modelling techniques)

National Institute of Standards and Technology (NIST): 2017

- **Data Science Intern:** Applied and Computational Mathematics Division
- Performed exploratory data analysis/visualization of molecular dynamics simulations of thermoset polymers (time series analysis)
- Optimized code for memory and time efficiency on large datasets.

Skills and Activities

- Fluent in Java, Python, experience with MATLAB, C, SQL, R, HTML
- Scikit-learn, Pandas, Keras, NLTK, Gensim, PySpark
- Wrote a genetic algorithm that optimized a recurrent neural network to survive in a virtual competitive ecosystem: 2016-2017 (without ML library)
- Stanford Coursera Online Machine Learning Course: 2016