Clayton Dean Blythe

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PROFESSIONAL PURSUIT

Employ my analytical, communicative, and leadership skills to advance the state of machine learning in society and industry.

EXPERIENCE

Ford Motor Company, Dearborn, MI — July 2017 - Present

- Machine Learning / Artificial Intelligence Scientist

- Utilized state of the art machine learning techniques in python, spark, and deep learning for applied research in credit risk, cyber security, computer vision, and autonomous vehicle development
- Improved credit origination model performance by .15 AUC, saving an estimated four million dollars over a five-year time frame

John Deere Financial, Johnston, IA

- Data Science Intern — January 2017 – July 2017

- Performed complex SQL queries to gather multi-dimensional customer and commercial data for binary classification of default for over one million collections accounts
- Employed advanced machine learning algorithms such as logistic regression, SVM, and parallelized random forest within a Hadoop ecosystem, vastly reducing time required for model redevelopment
- Improved classification accuracy, AUC by .2, and improved collections effort prioritization

Vanderbilt University, Nashville, TN

- Computational Nanoscience Research Associate — Summer 2016

- Utilized computational approach with python, pandas, scipy, Fortran, and numpy to simulate femtosecond-scale high harmonic generation in Helium due to counter-rotating polarized laser fields
- Engaged in large scale data cleaning, Fourier transforms, linear algebra, and visualization with matplotlib

University of Maryland, College Park, MD

- National Science Foundation Fellow — Summer 2015

- Developed graphical user interface in MATLAB to optimize microbattery thin-film deposition
- Received award for “Best Oral Presentation” out of two dozen undergraduate researchers
- Research led to a formal presentation at the American Physical Society March Meeting

EDUCATION

- Central College, Pella, IA - Bachelor of Arts — May 2017
- Majors: Physics & Economics, *Summa Cum Laude*
- Bangor University, Bangor, Wales, United Kingdom — Spring 2015

SKILLS

- Python, R, Spark, SQL, Scala, Git, Hadoop, PyTorch, Docker, SAS, h2o, ggplot2, Linux

PROJECTS

- Music genre recognition utilizing convolutional neural networks on six-second spectrograms
- Random Forest Model for binary classification of income using U.S. Census Data and scikit-learn
- S&P 500 historical investment outcome probability density analysis

HONORS

- Vanderbilt University, National Science Foundation REU
- University of Maryland, National Science Foundation REU, Best Oral Presentation
- Outstanding Senior in Economics Award | Richard Mentink Award in Physics