

# Alexander Miserlis Hoyle

8125 Paint Branch Dr., Room 4108  
College Park, MD 20740

hoyle@umd.edu  
github.com/ahoho

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## EDUCATION

### PhD in Computer Science

University of Maryland, *College Park, MD*

*Began Fall 2019*

### MSc in Computational Statistics and Machine Learning

University College London, *London, UK*  
Graduated with Distinction (4.0 equivalent)

September 2018

### BA in Mathematics

Wesleyan University, *Middletown, CT*

May 2013

## PUBLICATIONS

Hoyle, A., Wolf-Sonkin L., Wallach, H., Augenstein, A., and Cotterell, R.

Unsupervised Discovery of Gendered Language through Latent-Variable Modeling. ACL. 2019.

Hoyle, A., Wolf-Sonkin L., Wallach, H., Cotterell, R., and Augenstein, A.

Combining Sentiment Lexica with a Multi-View Variational Autoencoder. NAACL. 2019.

Hoyle, A.

Citation Detected: Automated Claim Detection through Natural Language Processing. UCL Master's thesis. 2018. *Received Distinction*.

## RESEARCH EXPERIENCE

### Master's Student and Intern, UCL Machine Reading Group

June 2018 - December 2018

- For thesis, developed model to determine when factual claims require an external citation for support using Wikipedia data. Constructed dataset and suite of neural architectures in TensorFlow, significantly outperforming baselines.
- Following thesis, collaborated with external researchers to develop generative latent variable model for quantifying gender bias in large text corpora. Devised novel Variational Autoencoder to combine disparate sentiment lexica into common score.

### Quantitative Analysis Center Research Apprenticeship, Wesleyan University

Summer 2011

- Collaborated on research in child language development with director of cognitive psychology lab.
- Assessed the validity of several competing theories regarding numerical development in children by modeling counting-system acquisition using empirical lab data.
- Delivered a poster presentation and composed a paper on research to incorporate in future lab work.

## PROFESSIONAL EXPERIENCE

### Senior Research Analyst, The Brattle Group

November 2014 - September 2017

- Initiated and later led development of large-scale document review tool in Python; created search backend, user interface, classification methods.
- Delivered weekly presentations to client at justice department to assess conditions of government housing and detect fraud using database of 30 million work orders; used data to build interactive websites for client use. Results of this work eventually led to restructuring of the housing authority's management & increased oversight.
- Replicated and extended econometric methods from academic papers for client analyses.

### Consulting Associate, Frank N. Magid Associates

July 2013 - October 2014

- Led analysis and construction of qualitative and quantitative reports for clients in media and marketing; worked directly with clients to meet objectives related to branding, product development, and strategy.

## AWARDS

Dean's Fellowship for Outstanding Academic Achievement, University of Maryland, 2019-2020

Dean's List, University College London, 2017-2018

Quantitative Analysis Center Research Apprenticeship, Wesleyan University, Summer 2011

## SELECTED SKILLS

- Fluent in French
- *Machine Learning and Data Analysis*: TensorFlow, PyTorch, Pyro, R, Pandas, Scikit-Learn, Shiny, SQL, Apache Spark, Excel, SPSS, Stata
- *Development tools*: Python, JavaScript, Django, Apache Solr, Amazon Web Services, Google Cloud Platform

## GRADUATE COURSEWORK

- Graphical Models
- Supervised Learning
- Applied Bayesian Methods
- Computational Linguistics
- Statistical Natural Language Processing
- Statistical Models and Data Analysis
- Advanced Deep Learning and Reinforcement Learning
- Unsupervised Learning
- Applied Machine Learning
- Selected Topics in Statistics