

ANNABELLE CARRELL

Graduate Student

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RESEARCH

Computational Biology Lab

Johns Hopkins Medicine

May 2019 – Present Baltimore, MD

- Research Graduate Student, Advisor: Elana Fertig.
- Investigate generative models for single-cell analysis. Primary focuses are information-theoretic regularization for an interpretable bottleneck layer in variational autoencoders and neural multivariate point processes to capture time-dependent dynamics of varying cell types.
- Lead a machine learning reading group within the lab where we read and discuss recent machine learning research.
- Write and maintain a Bioconda package for one of the lab's software packages.

Computational Semantics Lab

Center for Language and Speech Processing, Johns Hopkins University

August 2017 – May 2019 Baltimore, MD

- Research Graduate Student, Advisor: Benjamin Van Durme.
- Develop software for DARPA MATERIAL grant, specifically for the summarization component.
- Conduct research for independent projects, including writing, programming, and literature review. Projects were mainly focused on machine learning methods applied to Twitter data to answer computational social science problems.

WORK

Software Developer

ALKU Government Solutions

August 2016 – August 2017 Reston, VA

- Debugged and developed mission critical software as part of an agile development team on three week cycles.

Software Developer

Lockheed Martin

August 2015 – August 2016 Littleton, CO

- Debugged and developed mission critical software for near-real-time data analysis as part of an agile development team on two week cycles.

Cooperative Education Program

Department of Defense

January 2013 – August 2014 Fort Meade, MD

- Used artificial intelligence techniques and regular expressions to increase analyst efficiency in highly used software.
- Created a proof of concept to increase analyst efficiency in highly used software.
- Tested encryption devices used for classified information.

EDUCATION

M.S. in Computer Science

Johns Hopkins University

August 2017 – present

Supervisor: Elana Fertig

B.S. in Computer Engineering and Computer Science

University of Louisville

August 2011 – May 2015

With High Honors

SKILLS

Python Java SQL Git LaTeX
Spring Hibernate

Embedded C Assembly bash
Ruby C Javascript HTML CSS
R ReactJS Django

SERVICE

Founder

Context, Inc.

July 2012 – December 2013

- Managed start-up of an international non-profit connecting Guatemalan high-school to UofL students through webcams in a culture and language exchange.
- Managed overarching structures. Created 5-year plan and determined corporate partnerships. Constructed Board of Directors. Managed relations with consultants (accountant and lawyer).
- Traveled to Guatemala and met with Vice Minister of Culture to establish Guatemalan cooperation.

English Tutor

Louisville Free Public Library

January 2012 – May 2012

ACT Tutor

Americana Community Center

August 2011 – May 2012

PUBLICATIONS

Conference Proceedings

- Lippincott, Tom and Annabelle Carrell (2018). "Observational Comparison of Geo-tagged and Randomly-drawn Tweets". In: *Proceedings of the Second Workshop on Computational Modeling of People's Opinions, Personality, and Emotions in Social Media*. New Orleans, Louisiana, USA: Association for Computational Linguistics, pp. 50–55. DOI: 10.18653/v1/W18-1107. URL: <https://www.aclweb.org/anthology/W18-1107>.
- Wolfe, Travis et al. (2018). "Summarizing Entities using Distantly Supervised Information Extractors." In: *ProfS/KG4IR/Data: Search@SIGIR*, pp. 51–58.
- Van Durme, Benjamin et al. (2017). "CADET: Computer Assisted Discovery Extraction and Translation". In: *8th International Joint Conference on Natural Language Processing (System Demonstrations)*, pp. 5–8.

GRADUATE COURSE- WORK

Introduction to Probability

Machine Learning

Introduction to Algorithms

Natural Language Processing

CERTIFICATIONS

Network+

Security+