KIANTÉ D. BRANTLEY

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EDUCATION

University of Maryland, College Park
PhD. Computer Science **Fall 2016 – Present**
Advisor: Dr Hal Daumé III

Relevant courses: Numerical Analysis, Computational Linguistics II, Neural Modeling, Pattern Recognition, Machine Learning: Spectral Methods and Reinforcement Learning, Numerical Optimization

University of Maryland, Baltimore County
M.S. Computer Science, May 2016 **Fall 2015 – Spring 2016**
Advisor: Dr Tim Oates Cum GPA: 3.8
Thesis: BCAP: A Pruning Technique to Reduce Overfitting

B.S. Computer Science **Fall 2013 – Spring 2015**
Minor in Mathematics Cum GPA: 3.45/Major GPA: 3.75

Relevant courses: Machine Learning, Parallel and Distributed Computing, Data Visualization, Abstract Linear Algebra, Algorithms, Probability & Statistics, Mathematical Analysis I

The Community College of Baltimore County
A.A. Computer Science and A.A. Mathematics **Fall 2011 – Spring 2013**
Cum GPA: 3.649/Major GPA: 3.8

Relevant courses: Discrete Mathematics, Linear Algebra, Object-Oriented Programming

AWARDS/HONORS

Sloan Research Fellow **Spring 2017 - 2019**
CCBC Dean's List **2011 – 2013**
CCBC Phi Theta Kappa All-American Academic Team **2013**

SCHOLARSHIPS/FELLOWSHIPS

ACM SIGHPC/Intel Computational and Data Science Fellowships **Fall 2018 - Spring 2023**

The fellowship was established as a five-year program to increase the diversity of students pursuing graduate degrees in data science and computational science, including women as well as students from racial/ethnic backgrounds that have been historically underrepresented in the computing field.

NSF Louis Stokes Alliance for Minority Participation Bridge to the Doctorate Program (LSAMP BD) Fellowship **Summer 2016 - Fall 2018**

The LSAMP program assists universities and colleges in diversifying the STEM workforce through their efforts at significantly increasing the numbers of students successfully completing high-quality degree programs in science, technology, engineering and mathematics (STEM) disciplines.

University of Maryland College Park Dean's Fellowship **Fall 2016 - Spring 2018**

The Graduate Dean's Dissertation Fellowships are intended to support currently enrolled University of Maryland doctoral students who have excellent qualifications.

Department of Defense Graduate Fellowship **Fall 2015 - Spring 2015**

Transfer-Scholarships in Information Technology and Engineering (T-SITE) Scholar **Fall 2013 – Spring 2015**

T-SITE is a highly selective scholars program funded by the National Science Foundation's S-STEM program and managed by the Center for Women in Technology, for new transfers students from Maryland community colleges majoring in computing and engineering. T-SITE Scholars engage in academic coaching, peer, faculty and industry mentoring, and are part of the larger community of 99 scholars and 210 CWIT and Cyber Affiliates.

Maryland Senators and Delegates Scholarship **Fall 2013 – Spring 2015**

Awarded to Maryland residents who are enrolled at a two-year or four-year Maryland college or university as a full-time or part-time degree-seeking undergraduate or graduate student.

Transfer Student Alliance Scholarship **Fall 2013 – Spring 2015**

Offers eligible students who intend to earn their bachelor's degree at UMBC upon completion of their associate's degree at CCBC, guaranteed admission and scholarship. The program requires students to have a minimum cumulative 3.5 composite GPA.

Howard P. Rawlings Educational Assistance Grant **Fall 2013 – Spring 2015**

Awarded to full-time degree-seeking undergraduate students at an eligible institution in Maryland.

CCBC Foundation General Scholarship **Fall 2013**

Awarded to a student enrolled in 6 or more credits at the CCBC campus with a minimum cumulative GPA of 2.5.

PUBLICATIONS

Kianté Brantley, Amr Sharaf, Hal Daumé III

Active Imitation Learning with Noisy Guidance - ACL 2020

https://arxiv.org/pdf/2005.12801.pdf

Kianté Brantley, Wen Sun, Mikael Henaff

Disagreement-Regularized Imitation Learning - *ICLR 2020* **(spotlight talk)**

https://openreview.net/forum?id=rkgbYyHtwB

Sobhan Miryoosefi*, **Kianté Brantley***, Hal Daumé III, Miroslav Dudik, Robert Schapire
Reinforcement Learning with Convex Constraints - *NeurIPS 2019*
https://arxiv.org/abs/1906.09323

Sean Welleck, **Kianté Brantley**, Hal Daumé III, Kyunghyun Cho
Non-Monotonic Sequential Text Generation - *ICML 2019*
https://arxiv.org/abs/1902.02192

Amr Sharaf, Shi Feng, Khanh Nguyen, **Kianté Brantley**, Hal Daumé III
The UMD Neural Machine Translation Systems at WMT17 Bandit Learning Task
Bandit Learning for Machine Translation Shared Task - *EMNLP 2017*
https://arxiv.org/abs/1708.01318

Kianté Brantley
BCAP: An artificial neural network pruning technique to reduce overfitting (Order No. 10140605). 2016
https://search.proquest.com/docview/1806143855?accountid=14696

Ashwinkumar Ganesan, **Kianté Brantley**, Shimei Pan, Jian Chen (2015).
LDAExplore: Visualizing Topic Models Generated Using Latent Dirichlet Allocation -
Intelligent User Interfaces (IUI) - Textvis Workshop 2015
http://arxiv.org/pdf/1507.06593.pd

EXPERIENCE

Microsoft Research NYC Intern: **May 2019 - August 2019**
Machine Learning and Reinforcement learning **May 2018 - August 2018**

US Department of Defense Developer: **July 2010 - August 2017**
Junior Data Scientist:

- Utilized large structured DNS data for doing exploratory cyber analysis in a distributed Elasticsearch environment using Python Jupyter notebooks.
- Researched and developed several rule-based and statistical-based models for providing conclusions on several DNS anomalies
- Developed several custom Python modules for aiding data analysis and data visualization of DNS data, in support of other senior and junior data scientists

DevOps Developer:

- Led the development effort for a new provisioning framework using python Ansible. The framework reduced the previous operational process from three separate tools into one while improving reliability, decreasing deployment time and increasing the ability to push updates.
- Maintained legacy puppet infrastructure

Server Application Administrator:

- Deployed and managed an Apache NiFi server which significantly improved the ingest data rates of downstream dependencies by 50% and reduced the amount of dropped data packets.
- Prototyped using an Nginx reverse proxy server which would allow distribution of the ingest data load on several infrastructure servers seamlessly.

Cyber Analytic Developer:

- Lead developer on DDoS detection cyber analytic. Redesigned the analytic components to be more efficient, parallelized, scalable and reusable for other analytics.
- Researched and developed a semi-supervised machine learning Botnet detection analytic which used the following techniques: clustering, PCA and random forest
- Developed a network anomaly detection analytic to validate several events in netflow data

Testing/Software Engineer:

- Developed Java Junit test and Junit suites to verify the integrity and stability of several cyber analytics production products
- Organized and managed deployment of new Maven artifacts

HDFS Developer:

- Developed descriptive statistics analytics using Apache MapReduce and Apache Pig to describe raw netflow data. These analytics provided basic quantitative descriptions of the netflow data in a presentable and sensible way to understand.
- Discovered a major bug in the enterprise Apache Pig software deployed where files were being read in analytics deployed twice, instead of once; which resulted in skewing results of tons of analytics.

High SchoolWork-Study Intern (HSWS):

- Developed web accessibility websites.

Social Security Administration, Intern: **June 2010 – August 2010**

As a computer aid and office assistant, led the transition of changing the workflow to use soft copy inquiries instead of hardcopy inquiries for services that our unit provides.

UNPUBLISHED

Kianté Brantley, Jingling Li, Fenfei Guo

A Study of Deep Reinforcement Learning for Sentence Compression 2017

Amr Sharaf, **Kianté Brantly**, Parsa Saadatpanah, Ali Shafahi

Recurrent Neural Network for Sequence-to-Sequence Reinforcement Learning 2017

Kianté Brantly, Bamidele Suarau, Seth Mosgin

Experimental Comparison of Density-Based Spatial Clustering of Applications with Noise (DBSCAN) using k-d Trees vs. using VP Trees 2015

Kianté Brantly, Bamidele Suarau

Comparing the effect of compression using PCA and DAE on classifier performance, in predicting Epileptic Seizures from EEG data 2015

TRAVEL SCHOLARSHIPS/GRANTS

Computing Research Association (CRA) Underrepresented Minorities + Persons with Disabilities (URMD) Grad Cohort Conference Scholarship **2018 – 2019**

Neural Information Processing System (NIPS) Blacks in AI Workshop Scholarship **2017 – 2018**

National Society of Blacks in Computing (NSBC) Annual Conference Scholarship **2016 – 2017**

CERTIFICATIONS

Object-Oriented Programming Certificate **Fall 2013**
Community College of Baltimore County
The certificate is designed for career programmers who wish to add an additional programming language to their skills.

LEADERSHIP/ACTIVITIES/SERVICES

Reviewer

Annual Conference of the Association for Computational Linguistics	**2020**
International Conference on Machine Learning	**2019 – 2020**
Tapia Conference Scholarship Reviewer	**2019 – 2020**
Black in Ai Admission	**2019**

Leadership

Co-chair Black in Ai at AAAI	**2020**
Leader, University of Maryland College Park, Machine Learning Reading Group	**2018**

Co-curricular

Volunteered, Maryland Institute for Minority Achievement and Urban Education College/Career Conference	**2017**
Volunteered, MSDE CTE/PLTW Conference Student Panel	**2015 – 2017**
Volunteered, Western Tech High Open house	**2013 – 2016**
Participated, MIT Hackathon	**2014**
Participated, UMBC Hackathon	**2014**
Member, Golden Key International Honour Society	**2013 – Present**
Participated, Morgan State University Hackathon	**2013**
Member, Phi Theta Kappa Honors Society	**2012 – Present**
Participated, CCBC programming competition	**2012**
Volunteered, Western Tech High JavaScript Class	**2012**
Member, CCBC Android development club	**2012**
Member, Community College of Baltimore County STEM program	**2011 – 2013**

Extracurricular

Member, Men's UMD Intramural Football	**2017**
Member, Men's UMD Intramural Basketball	**2017 – 2018**
Member, Meyerhoff Scholars Friend of the Program	**2014 – 2015**
Member, Men's UMBC Intramural Basketball	**2013**
Member, Men's Flag Football and Men's Basketball	**2012 – 2014**