Tiwalayo (tee - wah) Eisape
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Interests

Natural language processing, cognitive modeling, computational cognitive neuroscience, machine learning

Education

2015 - 2019 B.S. Computer Science w/ minors in Mathematics & Philosophy, Boston College

Experience

2017 - present Research Assistant, Language Learning Lab, Boston College
2018 - present Collaborating Thesis Student, Social and Cognitive Computational Neuroscience Lab, Boston College
2016 Developer/Analyst, Advancement Information Systems, Boston College
2017 - present Technician, Information Technology Services, Boston College

Publications, posters, and talks

In Preparation

2019 Hyper-aligned Deep Convolutional Autoencoding for Dimensionality Reduction in fMRI Data, Thesis
Tiwalayo Eisape, Jayden Ziegler, Stefano Anzellotti, Joshua K. Hartshorne

2018 Fourth Replication of Saffran, Newport, & Aslin (1996) Word Segmentation: The Role of Distributional Cues
Han X. Choong, **Tiwalayo Eisape**, Shelby Grasso, Lisa Kurt, Celine J. R. Lim, Jingrun Lin, Carrie Milinazzo, Yueran Yang, Mariela Jennings, Lauren Skorb, & Joshua K. Hartshorne.

Conference Abstracts and Posters

2018 Using Machine Learning to Understand Transfer from First Language to Second Language
In the Proceedings of the 40th Annual Conference of the Cognitive Science Society
Tiwalayo Eisape, William Merrill, Sven Dietz, Joshua K. Hartshorne.

2018 Grammatical Accents: Using Machine Learning to Quantify Language Transfer
Psychology Undergraduate Research Conference, Boston College
Tiwalayo Eisape, William Merrill, Sven Dietz, Joshua K. Hartshorne.

2017 The Investigation of Fibonacci Retracement in the Foreign Exchange Market using Google Deep Dream
13th Ronald E. Mcnair Scholarship Research Symposium
Tiwalayo Eisape

Talks

2018 Syntactic Features for Native Language Identification in Spanish and English Corpora
The Atlantic Coast Conference Meeting of the Minds 2018

2017 The Investigation of Fibonacci Retracement in the Foreign Exchange Market using Google Deep Dream
13th Ronald E. Mcnair Scholarship Research Symposium

Honors and awards

2016 Ronald E. Mcnair Scholarship, Federal TRIO Programs
2017 Undergraduate Research Fellowship, Boston College
2017 IGEN Fellowship, Northwestern University
2016 Outstanding Oarsman Award, Chestnut Hill Rowing Association
2015 John Richard McDonough Award for Achievement in Humanities, St. Benedict's Preparatory

Teaching

Graduate Courses

Fall 2018 Teaching Assistant, Computational Models of Cognition (CS/PSYCH), Boston College

Undergraduate Courses

Fall 2018 Teaching Assistant, Data Mining (CS), Boston College
Spring 2019 Teaching Assistant, Algorithms (CS), Boston College
Spring 2018 Teaching Assistant, Computer Science I (CS), Boston College
Fall 2018 Teaching Assistant, Personal and Social Responsibility (PHIL/THEO), Boston College
Spring 2018 Teaching Assistant, Personal and Social Responsibility (PHIL/THEO), Boston College
Fall 2017 Teaching Assistant, Personal and Social Responsibility (PHIL/THEO), Boston College

Leadership

2016 Captain, Boston College Varsity Men's Rowing Team
2018 - present Residential Assistant, Boston College Residential Life
2017 - present Council Member, PULSE Program for Service Learning
2018 Preceptor, Options Through Education

Service

2017 Tutor, Resilient Coders
2018 - present Liaison, Project Bread
2018 - present Liaison, Oak Square YMCA
2015 Caretaker, St. Mary's Center for Women and Children: Bridge home
2017 - present Liaison, St. Mary's Center for Women and Children: Bridge home

Memberships

2018 Student Member, Cognitive Science Society
2018 Collegiate Member, National Society of Black Engineers

Tiwalayo (tee – wah) Eisape

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Education

Boston College, Morrissey College of Arts and Sciences

Math B.S & Computer Science B.S, Philosophy Minor

Major GPA: 3.938/4.0 | Graduation date: May 2019

- Honor's thesis: *Hyperaligned Deep Convolutional Autoencoding for Dimensionality Reduction in fMRI Data*
    - In the process of developing a tool to mine fMRI data for clustered representations to help decrease noise and boost signal. Addressing the problem of severely limited and high feature data in MVPA

Research

The Language Learning Lab at Boston College

***Research Assistant**,* August, 2017– present (~30hr/wk)

- Engineer classifier algorithms to take a unique approach to Native Language Identification. Delve deeply into classifiers such as Neural Networks and Support Vector Machines to achieve state of the art accuracy
- Utilize tensorFlow, scikit-learn, and Google's SyntaxNet among other packages to optimize all parts of the natural language processing pipeline, gaining professional level experience with the practical application of neural networks
- Present research across the country in both poster and oral presentation format. Conferences include *The Annual Meeting of the Cognitive Science Society 2018* and *ACC Meeting of the Minds 2018*

Ronald E. McNair Scholars Program, Federal Trio Programs

***Scholarship Recipient**,* September, 2015 – present

- Project: The Investigation of Fibonacci Retracement in the Foreign Exchange Market using Google Deep Dream. This research was presented at the 13th annual Ronald E. McNair Research Symposium and was later nominated for a Goldwater Scholarship

Work Experience

Computer Science Department, Boston College

***Teaching Assistant**,* January, 2018 – present (~10hr/wk)

- Contribute to teaching undergraduate and graduate students topics in computer science in a variety of courses: Computer Science I, Data Mining, and Computational Models of Cognition (Graduate course)
- Hold 5 office hours a week in addition to leading a discussion section (~25 students, for CS1 sections) and grading problem sets

Advancement Information Systems, Boston College

***Developer/Analyst**,* August, 2016 - August 2017

- Developed web applications ranging from in-office data management to applications for the entire Boston College community and beyond. Worked with SQL, HTML, CSS, JavaScript, Oracle APEX, and confidential databases

Information Technology Services, Boston College

***Eagle Technician**,* August, 2017 – present (8hrs/wk)

- Provide technical support in Boston College's O'Neill library, a research facility servicing BC's extended campus
- Attend monthly workshops and tutorials to stay current on operating systems and our suite of key applications (including the Microsoft Office applications, Boot Camp, and Virtual Box among others)

Diversity Engagement & Volunteer Work

PULSE Program for Service Learning

Council Member, August, 2015 – present (~7hr/wk)

- Serve as a teaching assistant and resource person for one of Boston's premier service learning courses, holding 3 offices hours/week, and coordinating bi-monthly meetings with an advising group of 30+ students who serve at different community service partners around Boston

Residential Life, Boston College

Resident Assistant, January, 2018 – present (~20hr/wk)

- Work as an RA on Boston College's Multicultural Learning Experience floor where I am responsible for the well-being of 22 first-year students. Coordinate weekly workshops and seminars on diversity inclusion and cross-cultural understanding in addition to all the responsibilities of a typical RA

Leadership

Boston College Varsity Men's Rowing

Captain, August, 2015 – May 2017

- Served as a captain on Boston College's Men's rowing team and was awarded the *Outstanding Novice Oarsman Award*, for being dedicated to 5 am practices 6 days / week as well as additional conditioning for a combined total of ~40hrs/wk.
- Competed at nation-wide regattas and achieved 6th place at the 2016 ACRA National Championships

Programming Languages: Python (4yrs), JavaScript (3yrs), C (2yrs), SQL (2yrs), R, Java, HTML, CSS

Packages of Familiarity: NLTK, tensorFlow, Pyro, pandas, scikit-learn

Languages: Russian: Professional Working proficiency; Spanish: Limited working proficiency

Courses of Interest: Artificial Intelligence, Computation Models of Cognition (Teaching Assistant), Deep Learning (Coursera), Data Mining (Teaching Assistant), Computability and Complexity