TIMOTHY ODONGA

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EDUCATION Doctor of Philosophy in Computer Science and Informatics Aug. 2023 - to date **Emory University** Master of Science in Electrical and Computer Engineering Aug. 2018 - Dec. 2019 Carnegie Mellon University **Bachelor of Science in Electrical Engineering** Aug. 2014 - May 2016 University of Southern California **Bachelor of Science in Physics** Aug. 2011 - May 2016 Minor in Mathematics Gordon College RELEVANT EXPERIENCE **Graduate Research Assistant** August 2023 - to date Emory University Georgia, USA July 2021 - June 2023 **Data Scientist** Dalberg Data Insights Kampala, Uganda **Data Fellow** January 2021 – July 2021 Dalberg Data Insights Kampala, Uganda · Building algorithms and designing experiments to merge, investigate, and extract data to deliver tailored solutions and reports to clients. • Using machine learning and statistical techniques to produce solutions to client problems. May 2020 - August 2020 Summer Intern Carnegie Mellon University - Africa Kigali, Rwanda Contributed to a research project involving the development of a deep learning based multimodal hetero-associative Episodic, Procedural, and Semantic Memory model for use by PR2 robot. **Graduate Teaching Assistant** September 2019 - May 2020 Carnegie Mellon University - Africa Kigali, Rwanda • Conducted recitations and office hours where I tutored students taking the Cognitive Robotics course in Spring 2020, and the Applied Computer Vision course in Fall 2019. Conducted lecture content review and suggested content in order to improve course quality. **Research Intern** June 2019 - September 2019 IBM Research Nairobi, Kenya Conducted research on algorithmic fairness of benchmark machine learning models used in dermatology. • Implemented experiments on deep learning models for image classification, and segmentation in Pytorch. · Contributed to a novel approach for evaluating skin tone bias in dermatology image datasets, found and reported that performance for benchmark skin disease diagnosis models is uniform across skin tone categories. **Teaching Assistant** August 2012 - May 2014 Massachusetts, USA Gordon College · Conducted tutoring during office hours for students in the Physics I & II, Mathematical Methods for Physics and Engineering I, and Statics courses • Graded homework assignments, and lab reports for the above listed courses.

PUBLICATIONS

- Kinyanjui Newton M., Timothy Odonga, Celia Cintas, Noel CF Codella, Rameswar Panda, Prasanna Sattigeri, and Kush R. Varshney. "Fairness of Classifiers Across Skin Tones in Dermatology." In International Conference on Medical Image Computing and Computer-Assisted Intervention, pp. 320-329. Springer, Cham, 2020.
- Kinyanjui Newton M., Timothy Odonga, Celia Cintas, Noel C.F. Codella, Rameswar Panda, Prasanna Sattigeri, and Kush R. Varshney. "Estimating Skin Tone and Effects on Classification Performance in Dermatology Datasets." arXiv preprint arXiv:1910.13268 (2019).

Lakshmi Subramanian CMU-Africa Student Excellence Award Given to a student that demonstrated leadership, academic excellence, & exceptional contributions to student life.	May 2020
IBM Great Minds Scholar Selected among students from Europe, the Middle East, & Africa to work alongside world-class scientists at IBM.	May 2019
Gordon College Graduation Honors Summa Cum Laude	May 2016
Jerrold L. McNatt Scholarship/Freshman Physics Award 2012	April 2013
CONFERENCES, INVITED TALKS, AND SUMMER SCHOOLS	

- Invited talk titled, "Beyond Patterns 19: Fairness of Classifiers Across Skin Tones in Dermatology" at Friedrich Alexander Universität Erlangen-Nürnberg (FAU) in March 2021.
- Poster and spotlight presentation at the International Conference on Medical Image Computing and Computer-Assisted Intervention (MICCAI) in October 2020.
- Completed the Interactive track of the Neuromatch Academy (virtual) in July 2020.
- Completed the IBRO-Simons Computational Neuroscience Imbizo summer school in Cape Town, South Africa, in January 2020.
- Poster and spotlight presentation at the Fair ML for Health workshop at the NeurIPS conference in December 2019.

ADDITIONAL ACTIVITIES

- Mentor with the Women in Machine Learning & Data Science (WiMLDS) Kampala chapter.
- Member of Black in AI.
- Member of the Trustworthy ML Initiative.
- Member of the Sisonke Biotik research community
- Secretary of the Data Science Club at CMU-Africa 2018-2019.
- Executive member on the Gordon College International Students' Organization 2012- 2013.

Skills

Languages: Python, JavaScript, C/C++, Matlab, Java Libraries: Pytorch, NumPy, Pandas, OpenCV, Scikit-learn, PySpark, NLTK, JAX Web Frameworks: Django, Fast API, Dash Tools: Git, Docker, AWS, GCP

SELECTED COURSEWORK

- Massive Open Online Courses: Computational Neuroscience (University of Washington on Coursera)
- Carnegie Mellon University: Introduction to Deep Learning; Applied Computer Vision; Applied Stochastic Processes; Introduction to Natural Language Processing; Linear Systems; Data, Inference & Applied Machine Learning; Data Structures & Algorithms; Cognitive Robotics
- University of Southern California: Signals & Systems; Introduction to Probability & Statistics; Engineering Computational Methods; Mathematical Methods for Physics and Engineering II
- Gordon College: Mathematical Methods for Physics and Engineering I; Linear Algebra; Calculus I, II, III

References

Can be provided upon request.