Curriculum Vitae

Josué Kpodo
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EDUCATION

Doctor of Philosophy, Dual Degree, Computer Science and Biosystems Engineering 2025 (Expected)
Bachelor of Science, Computer Science and Engineering 2020
Michigan State University, East Lansing, MI

RESEARCH & PROFESSIONAL EXPERIENCE

Graduate Research Assistant Aug 2020 – Present
Decision Support & Informatics Laboratory, East Lansing, MI

- Developing web applications and decision support tools for agricultural related applications such as drainage design and predicting soil moisture
- Maintaining web services and web servers
- Researching on Machine/Deep Learning for crop prediction

Embedded Systems Engineering Intern Jun – Aug 2020
Moddable Tech, Palo Alto, CA

- Contributed to the design of a Sensor API for ECMA TC53
- Contributed to the specifications of ECMAScript modules for embedded Systems.
- Developed embedded applications in JavaScript.
- Hardware: ESP8266, Moddable One, Motion Sensors

Undergraduate Research Assistant May 2019 – May 2020
Applied Agricultural Systems Modeling Lab, East Lansing, MI

- Implemented machine learning algorithms (regression, Random Forest, Lasso) to predict the occurrence of ear rot disease in corn in Michigan.
- Developed the GUI for the Climate Agriculture Modeling and Decision Tool (CAMDT) to simulate historical trends and rice and corn yields.
- Developed programming interfaces and Python wrappers for DSSAT.

Undergraduate Teaching Assistant Aug 2019 – May 2020
Michigan State University, East Lansing, MI

- MTH 103: College Algebra - Recitation
- MTH 132-133: Calculus – Tutoring

PUBLICATIONS

Peer-Reviewed Articles

1. Ferriby, H., Nejadhashemi, A.P., Hernandez-Suarez, J.S., Moore, N., Kpodo, J., Kropp, I., Eeswaran, R., Belton, B. and Haque, M.M., 2021. Harnessing Machine Learning Techniques for Mapping Aquaculture Waterbodies in Bangladesh. Remote Sensing, 13(23), p.4890.

2. Eeswaran, R., Nejadhashemi, A.P., Kpodo, J., Curtis, Z.K., Adhikari, U., Liao, H., Li, S.G., Hernandez-Suarez, J.S., Alves, F.C., Raschke, A. and Jha, P.K., 2021. Quantification of resilience metrics as affected by conservation agriculture at a watershed scale. *Agriculture, Ecosystems & Environment*, *320*, p.107612.

3. Ines, A.V., Singh, M., Chilvers, M., Han, E., Kpodo, J., Jha, P.K., Rasu, E. and Fusilier, K., 2019, December. Development of a decision support model for the management of fungal ear rot and associated mycotoxin contamination in corn grain. In AGU Fall Meeting Abstracts (Vol. 2019, pp. GC41H-1244).

LEADERSHIP AND ACTIVITIES

Secretary, *BAE Graduate Student Advisory Group Constitution* August 2021 – Present

- Coordinated graduate students an academic and social support networks
- Promoted education and knowledge via graduate student collaboration
- Assisted the vice-chairperson with hosting BAE seminars

Mentor, *Dale Carnegie Course at Auto-Owners Associates* October – December 2019

- As a graduate assistant, I helped the lead instructor coach four business attendees in building public speaking confidence and personal leadership competence

AWARDS

DeLisa Scholarship Award: For considerable contribution in water research and sustainability — January 2022

Dale Carnegie Graduation Award: Certified training in public speaking and corporate leadership — December 2018

The Mastercard Foundation Scholars Program: Full scholarship for Sub-Saharan African students. — May 2016

AFFILIATIONS

ECMA TC53 (Sensor Metadata Provenance Specification) June 2020 – Present

SKILLS

Programming	Python, C++, Fortran, JavaScript
Deep Learning	TensorFlow, PyTorch, scikit-learn, SpaCy, AllenNLP, BERT
Natural Languages	English (Fluent), French (Native)