

# Delwende Eliane Birba

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Ph.D. candidate in ML. ML Lecturer at the Virtual University of Ouagadougou.  
Founder of African Women in AI.

## EDUCATION AND TRAINING

### Candidate for Doctor of Philosophy in Computer Science

*University College Dublin [ 01/09/2021 – Present ]*

### Master in Data Science

*KTH Royal Institute of Technology (European Institute of Technology joint program) [ 01/08/2018 – 30/10/2020 ]*

**Thesis:** Comparative analysis of data splitting algorithms for machine learning model selection.

<http://kth.diva-portal.org/smash/record.jsf?pid=diva2%3A1506870&dswid=-5076>

### Master in Data science

*University Nice Sophia Antipolis/France (European Institute of Technology program) [ 01/09/2017 -01/10/2018]*

### Bachelor in Computer science

*National Chiao Tung University Taiwan [ 01/09/2013 – 01/07/2017 ]*

### AI Ethics and fairness training by Lighthouse3 Team

## HONOURS AND AWARDS

- **First girl in Mathematics:** National Olympiad of Burkina Faso [ 01/09/2011 ]
- **First girl in Physics:** National Olympiad of Burkina Faso [ 01/09/2011 ]
- **Taiwan scholarship 5 years:** Ministry of foreign affairs of Taiwan [ 2012 -2017]
- **EIT Digital Scholarship:** European Institute of Technology scholarship for outstanding performance[ 2017-2019]
- **Science Foundation Ireland Ph.D. Scholarship, Machine Learning Labs** [ 2021-present]

## RESEARCH AND EXPERIENCE

### Kindred people AB: Software engineer [ 01/09/2019 – 01/11/2021 ]

- Implemented mobile payment API for Unibet brand Integrated Swish, Trustly Earthport, Ideal, payment gateways into Kindred group websites.
- Implemented a microservice that acts as a proxy in the payment system.
- Worked with Java Springboot, Docker, Jenkins, Influx, Kubernetes.

### Independent researcher

- Working on Natural Learning Processing for Burkina Faso local languages translation
- Implemented model from French-Moore translation.

### Lecturer at the Virtual University of Ouagadougou

- Teaching Introduction to Machine Learning for master in AI and Data Science program
- Contributed to the curriculum proposal
- Master program committee member

### AI-King group: Research engineer consultant [ 01/01/2021 – 25/05/2021 ]

- Worked on a biometric digital verification system using facial recognition.
- Implemented a machine learning model, for information retrieval from Identity cards, face extraction, and recognition.

### Data scientist consultant at Bantaba, [ 01/02/2021 – 25/05/2021 ] :

- Implemented a pipeline for news content scraping and aggregation

### The University of Oxford, \*Oxford Applied and Theoretical Machine Learning Group:

Short training on uncertainty quantification 2020:

- Reproduced paper: Simple and Scalable Predictive Uncertainty Estimation using Deep Ensembles
- Evaluated Uncertainty with MNIST dataset split into in-distribution digits 0-4 and out-of-distribution digits 5-9.  
<https://github.com/delwende/deep-ensemble>

### University Nice Sophia Antipolis, ChemoSim Lab [ 01/02/2019 – 30/07/2019 ]

Research engineer-intern: Performed research on two topics

- The use of machine learning algorithms for odor molecules psychophysiology effects prediction such as heartbeat

- rate, temperatures, skin conductance, respiration rate
- Performed research on data splitting algorithms for machine learning model selection. °
- Formulated several literature reviews, performed data analysis for experiments °
- Wrote abstract, and submitted for both WiML and Learning Meaningful Representations of Life workshops
- Wrote a master thesis report.

#### **University Nice Sophia Antipolis, IS3-LAB [ 01/06/2018 – 30/07/2018 ]**

Research engineer, Intern:

- Performed research on deep learning for correcting misspelling in English and French clinical notes
- Implemented a character level sequence to sequence learning with Long Short-Term Memory
- Recurrent Neural Networks (LSTM RNNs) and Natural language processing to detect and correct misspellings in English and french clinical notes with 97% accuracy
- Formulated several literature reviews, performed data analysis for experiments °

#### **CONFERENCES AND SEMINARS**

- **Co-hosted event at WiML workshop NIPS2020:** Leading the way for the Next Generation of Black Women in AI
- **WiML workshop co-located at NIPS 2019:** Poster presentation on Machine learning for odor molecules psychophysiological effects prediction
- **Learning Meaningful Representation of Life, NeurIPS 2019 Workshop :** Poster: ML for odor molecules psychophysiological effect prediction
- **Ouaga Fintech Forum 2020:** Panelist Artificial intelligence and financial inclusion
- **Speaker at Africa innovation forum in Taiwan 2016,**

#### **CERTIFICATION**

- **Certificate for attending the 16th European Conference on Computer Vision.**
- **AI for Medicine Specialization:** deeplearning.ai given by prof Andrew Ng of Stanford University
- **Machine learning in Finance:** EIT DIGITAL summer school 2018 Budapest
- **Neural Networks and Deep Learning:** deeplearning.ai given by prof Andrew Ng of Stanford University

#### **MANAGEMENT AND LEADERSHIP SKILLS**

- **Founder of African Women in AI**
- **Co-founder of AI-King group**
- **Co-founder of ExcelTech**
- **External Auditor of Burkinabe association in Taiwan 2014-2015**
- **Assistant Secretary of my church's students group 2011-2012**
- **Treasurer of Bible study group (high school students) 2010-2011**
- **Assistant Secretary of Bible study group (high school students) 2009-2010**

#### **DIGITAL SKILLS**

Python, Java, C++, Tensorflow, Keras, PyTorch, R, LSTM, GRU, RNN, Git, Kubernetes, OpenCV

#### **LANGUAGE SKILLS**

Moore, French, English, Mandarin, Swedish

#### **MEMBER OF**

- Black in AI
- African Women in AI
- Women in Machine learning
- Stockholm AI
- Women in Tech Sweden
- Traductor-lab