

# Emmanuel Ojuba

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## EDUCATION

### Northeastern University

Masters of Science, Electrical and Computer Engineering

GPA: 3.95/4.00

Boston, MA

December 2020

- Concentration in Computer Vision, Machine Learning and Algorithms
- Coursework: Computer Systems, Reinforcement Learning, Network Programming with C++, Parallel Processing for Data Analytics with Pyspark, Computer Vision, Advances in Deep Learning, Advanced Machine Learning
- Activities: National Society of Black Engineers (NSBE), Intervarsity Christian Fellowship, Black in AI

### Purdue University

Bachelor of Science (**with Distinction**), Mechanical Engineering

GPA: 3.84/4.00

West Lafayette, IN

May 2015

- Coursework: Object-Oriented Programming (Java), Microprocessors & Interfacing, Linear Algebra & Differential Equations

## SKILLS

**Languages:** Python, C, C++, SQL. **Basics of** HTML, CSS, Assembly

**Technologies:** Docker, Apache Spark, Numpy, Pandas, Tensorflow, Keras

## EXPERIENCE

**SPIRAL Labs, Northeastern University** | *Keras, Python, Bash, Docker*

Graduate Research Assistant

Boston, MA

November 2018 – June 2019

January 2020 – August 2020

- Investigated the application of deep learning techniques such as convolutional neural networks to radio frequency device fingerprinting on a large scale dataset (> 400 GB)
- Delivered software and models to project sponsors via a Docker image
- Co-authored publication *Deep Learning for Radio Frequency Fingerprinting: A Massive Experimental Study*. *IEEE Internet of Things Magazine*, March 2020
- Co-authored publication *A Neural Network Architecture for Mitigating the Effect of the Channel in Radio Frequency Fingerprinting*. *Black in AI Workshop*, co-located with *NeurIPS*, December 2020

**Grantham, Mayo and Van Otterloo** | *Spark, Python, Scala, SQL*

Data Science Intern

Boston, MA

July 2019 – December 2019

- Developed natural language processing pipelines and trained Latent Dirichlet Allocation (LDA) topic models on public company filings to identify companies which discuss similar topics
- Extended functionality of Apache Spark LDA library to include resumption of model training from a model saved to disk
- Develop data quality checks for data used by investment teams

**KPMG Advisory Services** | *Python, Numpy, Pandas, Scikit-Learn, Tableau, SQL*

Management Consulting Analyst

Lagos, Nigeria

November 2016 – July 2018

- Utilized clustering techniques such as K-Means and K-Prototypes in a Python environment to create customer personas for banking clients leveraging data from surveys and relational database
- Developed business plans, strategy blueprints, and provided project management services to clients

## PROJECTS

Computer Systems Course | *C, Rust, Assembly*

- Implemented garbage collector, system calls, shell functionalities and other operating system functions in Linux and xv6 teaching operating systems

Gibbs Sampler for Latent Dirichlet Allocation | *Python, Cython, Numpy*

- Implemented collapsed Gibbs sampling algorithm for Latent Dirichlet Allocation and trained a topic model on Reuters-21578 news corpus (<https://github.com/Mogbo/Latent-Dirichlet-Allocation>)

Munchausen Deep Reinforcement Learning | *Python, Tensorflow, Keras*

- Implemented Munchausen Deep Reinforcement Learning from the *NeurIPS 2020 Publication Munchausen Reinforcement Learning* and tested on OpenAI gym's Cartpole and Atari Breakout environments (<https://github.com/Mogbo/DeepQ-Project>)