Jama Hussein Mohamud

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Education

African Institute for Mathematical Sciences (AIMS) Kigali, Rwanda October 2019 – September 2020

- MSc., Machine Intelligence (AMMI) supervised by *Dr. Moustapha Cisse*
- Recipient of the Google & Facebook scholarship

Research Thesis: Privacy-preserving representations Learning

Anadolu University, Eskisehir, Turkey, GPA (3.8/4.0) September 2016 – October 2019

- MSc., Electrical & Electronic Engineering supervised by *Prof. Dr. Omer Nezih Gerek*
- Recipient of Turkish Government scholarship

Research Thesis: A machine learning approach to estimation and classification of poverty levels

Gollis University, Hargeisa, Somaliland, GPA (3.99/4.0) November 2012 – September 2015

- BSc., Telecommunication Engineering
- **University Honor**: (President list - 9 semesters)

Research Thesis: Implementation and design of line follower robot

Publications

- ***J.H. Mohamud**, L. A. Thompson, A. Ndoye, L. Besacier.* Fast Development of ASR in African Languages using Self Supervised Speech Representation Learning (*EACL 2021*)
- ***J. H. Mohamud**; M.Y. Fuge, M. Cisse.* Self-supervised private representation learning (Thesis, 2020)
- ***J. H. Mohamud***; *O. N. Gerek*. Poverty Level Characterization via Feature Selection and Machine Learning (*IEEE SIU 2019*)

Work & Teaching Experience

AIMS (African Institute for Mathematical Sciences) Mbour, Senegal

Researcher / Teaching assistant December 2020 - November 2021

- Worked on privacy-preserving representations Learning
- Tutored AMMI students with machine learning courses by mentoring, facilitating tutorials, and writing coding scripts

Neuromatch Academy Deep Learning Summer School, Online, USA

Project Teaching assistant July 2021 - August 2021

- Prepared two projects for over 100 students participating in the summer school program, [project 1], [project 2], [slides]
- Supervised 8 groups (undergraduate and graduate students) consisting of 3-10 members on their projects

Bilisim Vadisi, Gebze, Turkey

Machine Learning Engineer January 2019 – October 2019

- Built real-time tracking system for car plate detection and recognition
- Developed a system for Ford that automatically checks if there are misplaced, missing, or extra objects on the car board
- Developed real-time object detection systems for tracking, detecting defects, and OCR

Anadolu University, Eskisehir, Turkey

Researcher February 2018 – January 2019

- Created a vision-based system to recognize sign-language gestures from video sequences
- Implemented an algorithm that adaptively resizes the images without losing/distorting the content of the images [GitHub]
- Implemented Edge Detection and Hough Transform algorithm to detect the vanishing points in the image [GitHub]

Somtel International LTD, Hargeisa, Somaliland

Software Engineer March 2014 – September 2015

- Tested and evaluated servers to check the efficiency, reliability, and compatibility with other systems
- Configured switches and routers to build fully functional network systems

Open Source Projects

- Scaling Graph neural networks for large scale molecular graphs (Ongoing)
- Implementation of robustness certificate for graph neural networks [GitHub]
- Developed a fully functioning face recognition system that is currently used by many industries [GitHub]
- Implementation of SAINT (Improved Neural Networks for Tabular Data via Row Attention and Contrastive Pretraining) [GitHub]
- Developed kernel methods to predict whether a DNA sequence region is binding to a specific transcription factor [GitHub]
- Implementation of very deep convolutional neural networks for raw waveforms [GitHub]

Technical Skills

ML: TensorFlow, PyTorch, Jax, Pytorch Geometric, Numpy, OpenCV, SciKit **Coding:** Python (Expert), C++ (Proficient), Java (Proficient)
Soft skills: Good Debugger, Good problem solver, Fast learner **DevOps**: Linux, Cloud, Docker, Git **Databases:** SQL, Solr

References

- Availlable upon request