Fred Mubang

Contact Information

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Summary

I am a Computer Science PhD student and research assistant at University of South Florida. My research involves using machine learning methods to perform time series forecasting and network simulation of various social media platforms such as Twitter and YouTube. I am particularly skilled with utilizing Deep Neural Networks and Extreme Gradient Boosting methods. I have my Masters in Computer Science from USF as well.

Education

University of South Florida 2018 - 2022 (Expected)

- Ph.D. in Computer Science, GPA: **3.87**.
- Advisor: Lawrence Hall, PhD

University of South Florida 2018 - 2021

- Master of Science in Computer Science, GPA: **3.87**.
- Relevant Courses: Data Mining, Machine Learning, Neural Networks, Advanced Neural Networks, Social Media Mining, Network Science, Natural Language Processing, Intro to AI

University of South Florida 2017 - 2018

- Computer Science Post Bachelor Studies, GPA: **3.7**.

Hillsborough Community College 2015 - 2016

- Computer Science Post Bachelor Studies, GPA: **4**.

Berklee College of Music 2010 - 2014

- Bachelor of Arts in Music Business and Guitar Studies.

Technical Skills

- *Programming Languages*: Python, C, C++, C#.
- *Libraries*: Scikit-learn, Pandas, Tensorflow, Keras, XGBoost, Numpy.

Research Experience

- **Social Simulation for Evaluating Online Messaging Campaigns** 2017-2021
  - $1.7 million project funded by the Defense Advanced Projects Research Agency.
  - Objective: High-fidelity computational simulation and of user activity across different social media platforms such as Twitter and YouTube, among others.
  - My contribution: I built neural network and XGBoost machine learning models to perform time series forecasting and network simulation of user activity in various social media platforms with millions of users.

Publications

1. R. Liu, F. Mubang, and L.O. Hall, "Simulating Temporal User Activity on Social Networks with Sequence to Sequence Neural Models," *2020 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, 2020, pp. 1677-1684
2. R. Liu, F. Mubang, L.O. Hall, S. Horawalavithana, A. Iamnitchi, and J. Skvoretz, "Predicting Longitudinal User Activity at Fine Time Granularity in Online Collaborative Platforms" in *2019 IEEE International Conference on Systems, Man, and Cybernetics (SMC)*, 2019.

Honors and Awards

- ***Finalist for Best Poster*** in 2021 University of South Florida Graduate Symposium
- ***Finalist for Best Paper Award*** in 2019 IEEE International Conference on Systems, Man, and Cybernetics (SMC)