

Samuel Onyambu

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Love solving complex programming problems. Have a stackoverflow account under the username onyambu. Currently my research is on hyperparameter Optimization under professor Hongquan Xu working mainly on optimal design construction. Willing to relocate to: Los Angeles, CA.

Education

PhD	University of California, Los Angeles , Statistics	Sept 2018 – Nov 2024
	<ul style="list-style-type: none"> • Dissertation: Studies in Hyperparameter Tuning, Design Selection and Optimization • GPA: 3.87/4.0 • Coursework: Design of Experiments, Sampling Analysis, Image Classification, Reinforcement Learning, Pattern Recognition, Monte Carlo Optimization, Machine Learning 	
MS	California State University, Fullerton , Statistics	Sept 2016 – May 2018
	<ul style="list-style-type: none"> • GPA: 3.97/4.0 • Coursework: Bayesian Optimization, Computational Theory, Numerical Optimization 	
BS	Kenyatta University, Nairobi, Kenya , Statistics and Programming	May 2011 – May 2015
	<ul style="list-style-type: none"> • Honours: First Class • Coursework: Operation Research, Probability Theory, Real Analysis, Statistical Learning 	
CPA	Kenya Accountants and Secretaries National Examinations Board , Certified Public Accountant	Dec 2011 – Dec 2014
	<ul style="list-style-type: none"> • Honours: PASS • Coursework: Quantitative Analysis, Advanced Taxation, Advanced Financial Reporting, Analysis and Management 	

Experience

University of California, Los Angeles , Adjunct Assistant Professor	Los Angeles, CA
<ul style="list-style-type: none"> • Teaching Statistics & Research 	Jan 2025 - Current
University of California, Los Angeles , Graduate Student Researcher, Travel Demand Models	Los Angeles, CA
<ul style="list-style-type: none"> • Conducting Literature Reviews-Information synthesis on Travel Demand choice models. • Building Models to understand the role of race in travel demand choice models 	Sept 2023 - June 2024
University of California, Los Angeles , Teaching Fellow	Los Angeles, CA
<ul style="list-style-type: none"> • Deliver lecture to the students. • Design lesson plans and implement them. • Write assignments, exams and grade them. 	Jan 2019 - June 2023
California State University, Fullerton , Data Analyst/Statistician	Fullerton, CA
<ul style="list-style-type: none"> • Lead assistant for analysis of High Impact Practices(HIPS) data for multi-year, campus wide project. 	Dec 2016 - July 2017

- Data input, advanced statistical modeling, and reporting of results using R, SPSS and Excel.
- Worked cooperatively with others, and independently, producing results in a timely manner.

Kenya Medical Research Institute(KEMRI), Junior Data Analyst - Internship

Nairobi, KE Jan 2016 - Apr 2016

- Helped in generating questionnaires using ODK
- Data input, and cleaning and analysis of medical data using Excel.
- Worked cooperatively with others.

Publications

Samuel Onyambu, Jose Toledo, Duoduo Ying, Hongquan Xu *KARGO: A Kriging-Based Adaptive-Region Global Optimization Method with a Data-Driven Quantile Region of Interest and Sufficient-Decrease Discipline* 2026

Under Review

Samuel Onyambu, Hongquan Xu *Evaluating Space-Filling Designs for Prediction and Sequential Optimization* 2026

Under Review

Samuel Onyambu, Hongquan Xu *Tuning differential evolution algorithm for constructing uniform projection designs* 2025

<https://www.sciencedirect.com/science/article/abs/pii/S0378375825000941> 

2022

Laxman Dahal, Henry Burton, **Samuel Onyambu** *Quantifying the effect of probability model misspecification in seismic collapse risk assessment*

<https://doi.org/10.1016/j.strusafe.2022.102185> 

Invited Talks

Samuel Onyambu *Uniform Projection Designs for AI/ML Hyperparameter Optimization and Explainability* May 19 - 21, 2026

Design and Analysis of Experiments (2026)

Location: Rutgers University, Busch Campus, Piscataway, New Jersey

Samuel Onyambu *Generation of Uniform projection designs via differential evolution with evaluation through prediction and function maximization* Aug 20 - 23, 2025

The 8th International Conference on Econometrics and Statistics (EcoSta 2025)

Location: Waseda University, Tokyo, Japan

Aug 4 - 7, 2025

Samuel Onyambu *Kriging-based Adaptive Region Global Optimization Algorithm*

The 11th Annual Loma Linda Workshop

Location: Loma Linda University, Loma Linda, CA, USA

May 8 - 11, 2023

Samuel Onyambu *A Trust region novel Optimization Algorithm*

The 6th International Conference on Design of Experiments (ICODOE 2022)

Location: FedEx Institute of Technology, The University of Memphis, TN, USA

Projects

Stackoverflow Account

[stackoverflow/onyambu](https://stackoverflow.com/onyambu) 

- Solve coding related problems
- Tools Used: C++, R, Python, Regex, Perl, Javascript, Numpy, Pandas, tidyverse

And-Or Graph(AOG) Library – 2018

[github/vcla/AOG](https://github.com/vcla/AOG) 

- Contributed in the maintenance of the AOG library
- Tools Used: C++, Sublime

Airplane Recommender System for revenue maximization

MS Project: 2018

- Developed a Recommender system for airplane revenue maximization
- Tools Used: R, Perl, Sublime

Custom Mini Bank Website

2020

- Built a website to store the customer details, deposits, interest earned and loans given.
- Tools Used: PHP, HTML, Microsoft SQL Server, Xcode

Technologies

Languages: C++, C, Python, R, Fortran, Perl, PHP, Azure Databricks, SQL, Numpy, Pandas, Tensorflow, Tidyverse

Technologies: Azure Databricks, .NET, Microsoft SQL Server, XCode, Rstudio