

# Samuel Boampong Nkrumah

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## Education & Work Experience

**Franko Trading Enterprise - Ghana**, Financial Auditor

October 2019 – January 2020

**University of Missouri – Columbia Biochemistry PhD Program**

August 2018 – January 2019

**Fisk University**, B.Sc. Biology

August 2014 – May 2018

**Opoku Ware High School**, WASSCE Cert. in General Science

August 2010 – May 2013

## Relevant Coursework and Skills

Computational Coursework	
<b>University:</b> Java (A), Data Structures & Algorithms (A), Bioinformatics (A)	<b>Online:</b> <a href="#">Python (MIT)</a> , <a href="#">R</a> , <a href="#">Github</a> , <a href="#">Machine Learning</a> , <a href="#">Bioinformatics III</a>
Quantitative Coursework	
<b>University:</b> Single-Variable Calculus (A), Physics (A)	<b>Online:</b> <a href="#">Probability &amp; Statistics</a> , <a href="#">Linear Algebra</a> , <a href="#">Differential Equations</a>

## Awards & Honors

UCLA-HBCU Bruins in Genomics Summer Research Fellowship

June – August 2018

MIT Biology Gould Summer Research Fellowship

June – August 2017

Dean's List, Fisk University

August 2015

Erastus Milo Cravath Presidential Scholarship, Fisk University

August 2014 – May 2018

Overall Best Student in Social Studies, Opoku Ware High School

2012

## Research and Relevant Experiences

**Independent work on TCGA Breast Cancer Classifier**

August 2021

- Developed k-Nearest Neighbor and Elastic Net models for classifying TCGA Breast Cancer samples using DNA Methylation data.
- Published TCGA Breast Cancer Classifier on [Github](#)

**Participant, African Society of Bioinformatics and Computational Biology Omics Codeathon**

June 2021

- Worked on machine learning models for classifying breast cancer subtypes using TCGA multi-omic data.

**Research Intern in Bioinformatics**

June – August 2018

UCLA Bruins in Genomics Summer Research Program

Mentor: Dr. Stan Nelson

- Developed an efficient computational method to verify the identity of DNA and RNA specimen for quality control purposes.

### Research Intern in Biochemistry

MIT Biology Summer Research Program

June – August 2017

Mentor: Dr. Tom Schwartz

- Tested the utility of a nanobody suite for performing high resolution in vivo and in vitro Nuclear Pore Complex structural studies.

### Undergraduate Research Assistant in Biochemistry/Bioinformatics

Meharry Medical College

June 2015 – August 2017

Mentor: Dr. Jamaine Davis

- Performed sequence alignments of BRCT-domain proteins for homology-based inference of protein function.
- Expressed and purified BRCT domain proteins for testing protein-protein interactions involved in DNA damage repair.

### Undergraduate Research Assistant in Molecular Biology

Fisk University

August 2014 – April 2015

Mentor: Dr. Brian Nelms

- Performed SWIP assays to discover the role of the FKH-8 transcription factor in *C.elegans* neurodegeneration.

## Publications

### Preprint

Nkrumah, Samuel. [Protein Folding from the Perspective of Chaperone Action](#) (2019). arXiv

## Presentations

“Verifying Identity of DNA and RNA specimen through SNP analysis”

Institute for Quant. Biosciences, UCLA: Summer Program Showcase August 2018

“Characterization of Nucleoporin Nanobodies”

Annual Biomedical Research Conference for Minority Students October 2017

Department of Biology, MIT: Summer Program Showcase August 2017

## Teaching

Peer Tutor, Chemistry and Math, Fisk University.

August 2014 – August 2017

Teaching Assistant, Intermediate Algebra, Fisk University.

August 2015

## Leadership & Community Service

Volunteer, [MLK Day of Service](#), Fisk University.

2017

Representative, [Clinton Global Initiative University](#), Fisk University.

2016

Volunteer, [Clinton Global Initiative University Day of Action](#)

2016

Commitment Maker, MiCode, [Clinton Global Initiative University](#)

2016

Student Leader, First-Love Bible Studies Group, Fisk University

2016