

JOY NYAANGA

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EDUCATION

Ph.D.	Northwestern University – Evanston, IL <i>Quantitative Biology</i>	Expected 2022
M.A.	Princeton University – Princeton, NJ <i>Molecular Biology</i>	2018
B.S.	John Carroll University – University Heights, OH <i>Double Major: Biochemistry; Cell and Molecular Biology</i>	2017

SKILLS

Computing: R, GitHub, Python, bash
Data science: data analysis, data mining, visualization, dashboarding
Statistics: regression models, maximum likelihood, gaussian mixture modeling, model selection

RELEVANT RESEARCH AND PROJECTS

Ph.D. Candidate Northwestern University	2018 - Present
<ul style="list-style-type: none">Investigate the genetic variation underlying differences in developmental growth using <i>Caenorhabditis elegans</i> to decipher how organisms control growth rate and developmental timingDesign and optimize a high-throughput experimental platform for the acquisition of developmental traitsCollaborate with mathematicians to build mechanistic models to explore complex growth relationshipsDevelop and implement an R package to facilitate handling and visualization of image-based dataMentor and train six undergraduate and high school students on independent computational research projectsPresented research at two conferences (1 poster, 1 short talk) and submitted two first-author publications	
Masters Student Princeton University	2017 - 2018
<ul style="list-style-type: none">Probed RNA-protein interactions regulated by 8-oxoG to uncover cellular changes caused by oxidative stressAnalyzed results and identified alternative approaches and solutions to researchModeled biochemical reactions in Python to study the dynamics of gene and protein networks	
Summer Research Student Cleveland Clinic	Summer 2016
<ul style="list-style-type: none">Computationally identified mutations that altered N-glycosylation in factor VIII, a procoagulant proteinConstructed plasmids containing mutations of interest	
Undergraduate Researcher John Carroll University	2015 - 2016
<ul style="list-style-type: none">Studied lipid peroxidation of linoleic acid using gas chromatography – mass spectrometryPresented results in a university poster competition (awarded special merit)	

SELECT LEADERSHIP & OUTREACH

Graduate Teaching Assistant Northwestern University	2020 - 2021
<ul style="list-style-type: none">Collaborated with faculty to instruct 100+ students across three introductory biology coursesDesigned quiz material, prepared lecture presentations, and facilitated in-class discussionsProvided verbal and written assessment on course progress	
Campus Tour Guide John Carroll University	2015 - 2017
<ul style="list-style-type: none">Managed correspondence with prospective students and parentsDemonstrated the importance of clear communication while leading campus walking tours and visit programs	
Volunteer Coach Williamsville United Track and Field Club	2010 - 2014
<ul style="list-style-type: none">Fostered growth of young respectful competitors ages 5 - 14Led athletes in skill drills and encouraged team cooperation	

HONORS & AWARDS

NSF-Simons Center Scholar , Northwestern University <i>Fully funded scholar as part of the Center for Quantitative Biology</i>	2019 – Present
Rev. George J. Pickel, S.J. Senior Chemistry Award , John Carroll University <i>Recognized for outstanding scholarship, leadership, integrity, and commitment</i>	2017
Mary and Peter A. Lambros Scholarship , John Carroll University <i>Awarded \$1,500 recognizing academic achievement</i>	2017