

JOY NYAANGA, PHD

Bioinformatician

Contact

Chicago, IL
(716) 908-4355
jnyaan@gmail.com
www.joynyaanga.com
<https://github.com/jnyaanga>

Programming

R
Python
bash
SQL

Tools

RStudio
Jupyter
git/GitHub
AWS
HPC (SLURM)

Data Science

Data visualization
Markdown reports
Machine Learning
Advanced statistical analysis

Research

Genetics & Genomics
R package development
Interdisciplinary collaboration

EDUCATION

Ph.D., Quantitative Biology Northwestern University GPA: 3.9/4.0	2018 - 2022
M.A., Molecular Biology Princeton University GPA: 3.6/4.0	2017 - 2018
B.S., Chemistry: Biochemistry B.S., Cell & Molecular Biology John Carroll University GPA: 3.64/4.0	2013 - 2017

EXPERIENCE

Bioinformatician Northwestern University	2022 - Present
<ul style="list-style-type: none">Manage, organize, and analyze whole-genome sequence dataDevelop and maintain bioinformatics pipelines for variant calling, population genomics, and genome-wide association mappings	
Ph.D. Candidate Northwestern University	2018 - 2022
<ul style="list-style-type: none">Conduct extensive analysis of large experimental data sets in R to investigate organismal growth and developmentImplement advanced analytical and statistical methods including linear mixed effect models, ANOVA/regression models, model selection, and clustering in R	
Data Science Intern Celsius Therapeutics – a therapeutics company leveraging single-cell RNAseq data to develop and deliver precision medicines.	May 2021 – Sept 2021
<ul style="list-style-type: none">Coded extensively in Python and R to analyze single-cell RNAseq data to uncover new insights into disease progression using trajectory inference algorithmsGenerated comprehensive reports using Rmarkdown and Jupyter to deliver findings with team leadsMaintained a reproducible coding environment on AWS EC2 instance	
Graduate Researcher Princeton University	2017 – 2018
<ul style="list-style-type: none">Built computational ODE models in Python to study the dynamics of protein networksProbed RNA-protein interactions to uncover cellular changes caused by oxidative stress	

PUBLICATIONS

Nyaanga, J., Crombie, T. A., Widmayer, S. J. & Andersen, E. C. easyXpress: An R package to analyze and visualize high-throughput *C. elegans* microscopy data generated using CellProfiler. *PLoS One* (2021)

Nyaanga, J. et al. Changes in body shape implicate cuticle stretch in *C. elegans* growth control. *Cells & Development* (2022)

[preprint] **Nyaanga, J.** & Andersen E.C. Linkage mapping reveals loci that underlie differences in *C. elegans* growth. *bioRxiv* (2022)