

# CODY NHAN PHAM

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## EDUCATION

### Bachelor of Science in Microbiology and Biotechnology

August 2019-May 2023

Missouri State University – Springfield, MO

- GPA 3.86/4.00
- International Leadership Scholarship (2019-2023)
- Dean's List for 8 consecutive semesters
- Ranked in the top 98<sup>th</sup> percentile in the ETS Biology Major Field Test

## LABORATORY EXPERIENCE

### Research Assistant

April 2021-May 2023

Missouri State University – Springfield, MO

- Investigated toxicological effects of engineered Ag and Zn nanomaterials on 2 model plant species (*Arabidopsis thaliana* and *Brassica napus*) to reveal potential environmental impacts and inform nanomaterial safety regulations.
- Conducted total RNA extraction, RNA-seq analysis, and qPCR validation for differential gene expression using the Bioinformatics software CLC Genomics Workbench, identifying 380+ differentially expressed genes.
- Performed 3 independent Inductively Coupled Plasma Mass Spectrometry (ICP-MS) analyses over 4 months to accurately determine the amount of metal uptake by plants, providing data for understanding metal toxicity in plants and their potential for phytoremediation.
- Developed general-purpose automation scripts that accelerated the Data Analysis pipelines by over 8 times, significantly reducing data processing time and labor costs.
- Extracted and quantified the plant's total chlorophyll concentration with spectrophotometry, and did Statistical Analysis and graphing using R.
- Designed and created 40+ hydroponics growing pots and optimized a hydroponics planting protocol for future experiments.

## ADDITIONAL WORK EXPERIENCE

### Customer Service

October 2020-March 2021

Compass Group USA – Springfield, MO

- Operated POS cash register, handling 300 transactions per shift on average.
- Compiled and managed reports and records.

### Content Writer

September 2017-April 2019

Help Heal Share Organization HHSO – Ho Chi Minh City, Vietnam

- Compiled social media posts to appeal to public attention to non-profit charity activities, scored an average reach of around 2500 accounts.
- Designed advertising posters for social media and public events.
- Organized charity events that involved up to 50 volunteers, providing patient care, and about 700 free-meal portions per event at various hospitals.

## ADDITIONAL SKILLS

NodeJS

R and R Studio

Python

MongoDB (NoSQL)

GraphPad Prism

HTML/CSS/JS

Microsoft Office Suite

CLC Genomics Workbench

Galaxy