

# GWYNETH HUYNH

Los Angeles, CA

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## EDUCATION

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### GEORGIA INSTITUTE OF TECHNOLOGY (4.00 GPA)

*Master of Science in Computer Science*

Atlanta, GA

2023-2025

### UNIVERSITY OF CALIFORNIA, LOS ANGELES (SUMMA CUM LAUDE – 3.99 GPA)

*Bachelor of Science in Human Biology and Society*

Los Angeles, CA

2017-2020

## EXPERIENCE

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### HIGH PERFORMANCE COMPUTING (HPC) SYSTEMS INTERN

UCLA Office of Advanced Research Computing

Los Angeles, CA

May 2024 - Present

- Contributed to the migration of **HPC cluster** from **Grid Engine** to **SLURM** by configuring and implementing cluster-specific policies to enhance **job scheduling** and resource management.
- Refactored and optimized existing codebase for node management and statistics gathering of over 800 nodes, including A100 and H100 **GPU** nodes, and over 26,000 cores.
- Collaborated with cross-functional teams to design and test SLURM configurations, improving workload efficiency.

### BIOINFORMATICS RESEARCH ASSISTANT

California NanoSystems Institute

Los Angeles, CA

November 2021 - May 2024

- Utilized **R** and **Python** to generate comprehensive visualizations for diversity, differential abundance, PCA.
- Employed **Machine Learning (ML)** techniques such as hierarchical clustering to determine correlation between disease state and vaginal microbiome composition.
- Developed and tested **Bash** and **Python** scripts to streamline pipeline commands and data entry, significantly reducing data processing time from hours to mere seconds.
- Led team through migration from an outdated bioinformatics data science platform to **QIIME2**.

## COURSEWORK/SKILLS

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- Languages:** Python, C, C++, Java, JavaScript, SQL, R, Bash, CSS, HTML
- Technologies/Frameworks:** SLURM, Grid Engine, QIIME2, React, Node.js, Express, MySQL, Azure, Docker
- Coursework:** Data Structures and Algorithms, Operating Systems, Machine Learning, High Performance Computer Architecture, Computer Networks

## PROJECTS

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### DISTRIBUTED STORE SIMULATOR | C++

- Utilized **gRPC** and **protobufs** for asynchronous product request handling and vendor bid retrieval in a scalable, multi-threaded setup.
- Developed a **threadpool** with synchronized task management, optimizing request processing and ensuring thread safety.

### MAPREDUCE | C++

- Developed and implemented a **MapReduce** framework to process large-scale datasets through **sharding** and **multithreading**, enabling parallel processing of gigabytes of text files.
- Utilized **gRPC** for fault tolerance and task distribution between different processes.

### CAPSULE | JAVASCRIPT, PYTHON, HTML, CSS

- Developed a comprehensive end-to-end web application using **React** and **Node.js with Express**
- Integrated **AWS S3** for cloud storage and **MySQL** database to manage and retrieve user-uploaded images.
- Designed and implemented a **collaborative filtering** recommendation system, enhancing user experience through personalized outfit combinations.