

GWYNETH HUYNH

Los Angeles, CA

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EDUCATION

GEORGIA INSTITUTE OF TECHNOLOGY (4.00 GPA)

Master of Science in Computer Science

Atlanta, GA

January 2023 - May 2025

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

Bachelor of Science in Human Biology and Society

Los Angeles, CA

September 2017 - December 2020

EXPERIENCE

HIGH PERFORMANCE COMPUTING (HPC) SYSTEMS INTERN

Los Angeles, CA

UCLA Office of Advanced Research Computing

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

Los Angeles, CA

California NanoSystems Institute

November 2021 - April 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- Led team through migration from an outdated bioinformatics data science platform to **QIIME2**.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

- 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

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.

BARRIER SYNCHRONIZATION | C

- Utilized **OpenMP** and **MPI** to implement barrier algorithms, facilitating synchronization across cores and clusters.
- Leveraged **SLURM** scheduler on Georgia Tech's **PACE cluster** to test performance of barriers across a range of thread and process configs.
- Developed and tested algorithms using **Microsoft Azure** cloud-based computing environment.

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.