

# Brittany Ho

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## TECHNICAL SKILLS

**Specialties:** Machine Learning, Deep Learning, Computer Vision, Natural Language Processing, HPC, Full-stack, Infra

**Programming Languages:** Java (advanced), C++ (advanced), Python (advanced); Swift, R, and JavaScript (intermediate)

**Technical:** PyTorch, MQTT, Linux, LLMs, TCP/IP, Postgres, TensorRT, SQL, NoSQL, AWS, TensorFlow, SKLearn, Full-stack

**Certifications & Training:** Cloud Computing (Coursera), macOS System Administrators (LinkedIn), C# with Unity (LinkedIn), Social and Behavioral Research (CITI), Deep Learning (NVIDIA), Develop apps for Apple platforms (Apple)

## EDUCATION

**University of the Pacific** | B.S. in Computer Science & Data Science | GPA: 3.7 CA 12/2024

**University of Illinois at Urbana Champaign** | Computer Engineering IL 08/2020 - 05/2022

*Relevant courses:* Artificial Intelligence, Computer Game Technologies, Computer Systems & Networks, Analytics Computing, Computer Graphics, Computer Simulation, Operating Systems, Application Development

**Achievements:** Dean's Honor Roll, University's Best Project Fall 2024, [Publication](#) and [Book Chapter](#), 2nd place H<sub>2</sub>O [Hackathon](#)

## EXPERIENCE

**NVIDIA - High-Performance Computing and Deep Learning Lab** Santa Clara, CA 01/2024 - 08/2024

*Performance Engineer Intern* | *Deep Learning, HPC, PyTorch, TensorRT*

- Benchmarked GPU performance across leading HPC and DL frameworks (e.g., PyTorch, TensorRT).
- Developed automated performance benchmarking and monitoring scripts in Python, improving data collection efficiency.
- Conducted performance issue analysis with global teams to enhance system reliability and efficiency.
- Generated comprehensive test reports with Excel and Tableau to support strategic decisions for 5+ global teams.
- Delivered 100% of tasks labeled critical on time, ensuring uninterrupted workflows for high-impact projects.

**QQ Tech, Inc** Tracy, CA 08/2024 - 12/2024

*Software Engineer Intern – Data & ML Applications* | *Web crawler, Machine learning, Natural language processing*

- Developed robust web scraping pipelines to gather and process structured and unstructured data for NLP projects.
- Implemented efficient classification algorithms by collaborating with front-end developers and data scientists.

**Dr. Pallipuram's Research Lab - University of the Pacific** Stockton, CA 01/2023 - 02/2025

*Research Assistant* | *Natural language processing, LLM, GPT-3.5 Turbo, Data mining, Recommender systems, Generative AI*

- Developed an NLP framework leveraging GPT-3.5 Turbo for user review analysis and recommendation generation.
- Published a [journal paper](#) in Elsevier's Machine Learning with Applications, achieving 90%+ Bard-based satisfaction.
- Conducted NLP text classification research, published findings to [book chapter](#) "Machine Learning in Educational Sciences".
- Developed a Virtual TA using Sentence Transformer and Prompt Engineering.

**Pacific Technology** Stockton, CA 01/2023 - 12/2023

*Student Technical Support Technician* | *Networking, Workstation reimaging*

- Resolved 20+ tickets weekly, including networking issues and workstation reimaging.
- Consistently won top-3 technician ranking for exceptional efficiency, technical expertise, and high-quality support.
- Supported and managed audio/visual equipment for 50+ university events, ensuring flawless presentations.

**University of the Pacific - School of Engineering and Computer Science** Stockton, CA 08/2023 - 12/2023

*Teaching Assistant* | *Data Structures and Algorithms, C++*

- Designed and graded coursework, hosted weekly office hours and exam reviews, instructed classes as a stand-in during the professor's absence, and supported 50+ students in mastering programming fundamentals.

**Grainger Electrical and Computer Engineering - Advanced Power Lab** Champaign, IL 06/2021 - 05/2022

*Research Assistant* | *BeagleBone Black, MQTT, Java Graphics*

- Engineered wireless MQTT-based communication with wind energy systems, enabling real-time control and data monitoring.
- Pioneered the lab's first graphical visualization system capable of displaying 10+ real-time signals with an emergency shutdown feature and customizable UI for enhanced system control and safety.

**Illinois Office of Undergraduate Research & the Graduate College** Champaign, IL 01/2021 - 06/2021

*Research Apprentice* | *Computational Fluid Dynamics, Finite Element Analysis*

- Optimized computational mesh structures for fluid simulations under the guidance of a Ph.D. candidate at the Hydrosystems Laboratory on a river dynamics and sediment transport project using CFD and Finite Element Analysis.

## PROJECT

**Senior Project: Freeze - Video Content Search Engine** Stockton, CA 08/2024 - 12/2024

*R&D Engineer* | *PySceneDetect, YOLOv8, PostgreSQL, Scene and Object detection, Video analysis, Search engine*

- Developed video content search engine using PySceneDetect and YOLOv8, enabling scene and object searches with thresholds.
- Optimized with Metal Performance Shaders to process 20-minute HD videos in under 3 minutes with high accuracy.
- Awarded the University's **Best Project of Fall 2024**, showcased at the university exhibition. [\[Project Showcase\]](#)