Heidi Pan

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EDUCATION

Georgia Institute of Technology — Atlanta, GA

BS/MS in Computer Science — *Aug. 2022 – May 2026*

- **Relevant Coursework:** Data Structures & Algorithms, Systems & Networks, Database Systems, Design & Analysis of Algorithms, Machine Learning, Computer Vision, Mobile App Development, Big Data Analysis

EXPERIENCE

Software Engineering Intern — May 2025 – Aug 2025

Adobe — *Seattle, WA*

- Implemented an **AI-powered video analysis feature** in the **Adobe Premiere iOS app** to extract visual insights from user-submitted media, reducing manual editing prep time by **30%**.
- Converted a **PyTorch** deep learning model to **CoreML** and deployed it on-device, enabling real-time inference with **<1s** latency and supporting offline usage.
- Integrated **Artifactory** with Apple's **On-Demand Resources** to manage large models dynamically, reducing app size by **40%** and ensuring reliable runtime delivery across devices.
- Developed responsive **SwiftUI** interfaces for media upload, configuration, and result preview, improving task success rate by **60%** in usability testing.

iOS Software Developer & Bootcamp Instructor — Jan 2024 – Present

Georgia Tech iOS Club — *Atlanta, GA*

- Designed and delivered **iOS development** lessons on **Xcode**, **Git**, **Swift**, **SwiftUI**, **Firebase**, and **XCTest** to students with varying experience levels.
- Architected and deployed **Firebase Firestore** backend for *SmartyPants* (**Devpost Link**), a study group app, enabling real-time messaging for **500+** users with **<1s latency**.
- Improved data synchronization reliability by 30% on *GTExplorer* (**Devpost Link**) through **Firebase integration** and automated testing (**XCTest**), ensuring seamless user experience.

Graduate Teaching Assistant - Machine Learning — Aug 2023 – Present

Georgia Institute of Technology — *Atlanta, GA*

- Automated ML grading using **Python/Docker** and **CI/CD** (**GitHub Actions**), reducing workload by **20** hours/semester.
- Optimized **Python ML workflows** (**TensorFlow/PyTorch**) via hyperparameter tuning, cutting training times by **35%** with >95% accuracy.
- Developed Python scripts (**pandas**) to automate data preprocessing, reducing time spent on dataset transformations by **40%** for ML model training.
- Mentored students in deploying scalable ML systems, emphasizing best practices for reproducibility, **model versioning**, and ethical considerations in real-world AI applications.

PROJECTS

NoteMakers | Capstone Project ⓞ — Aug 2023 – May 2024

- Developed a classical music education mobile app with **React Native** and **Node.js**.
- Implemented real-time quizzes with **WebSockets** and integrated a music library using the **YouTube API**.
- Improved backend scalability and speed with **Redis caching** on **MongoDB**, reducing response time by 50%.
- Designed and documented **RESTful APIs** for managing user progress, lessons, and quiz flow.

TECHNICAL SKILLS

Languages: Python, Java, Swift, TypeScript, JavaScript, SQL, HTML, CSS
Frameworks & Libraries: SwiftUI, React, Next.js, Node.js, Express.js, TensorFlow, PyTorch, Pandas, NumPy
APIs & Data: RESTful APIs, Firebase, Redis
Databases: PostgreSQL, MySQL, MongoDB
Tools & Platforms: Docker, AWS, Git, Linux, Postman, CI/CD
Development Practices: Agile/Scrum, Test-Driven Development (TDD)