

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

- Designed and implemented a **video processing feature** in the **Adobe Premiere iOS app** to generate visual insights from user-submitted media, reducing manual editing prep time by **30%**.
- Built backend services using **Django** and **Django REST Framework** to handle video uploads, run processing pipelines, and return results in **under 500ms** for short clips.
- Developed responsive **SwiftUI** interfaces for media upload, configuration, and result preview, improving task success rate by **60%** in usability testing.
- Implemented structured local storage using **FileManager**, enabling persistent access to results across sessions while maintaining organized user-specific data.

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 **GTE Explorer** ([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, JavaScript, SQL, HTML, CSS

Frameworks & Libraries: SwiftUI, Django, Django REST Framework, React, TensorFlow, PyTorch, Pandas, NumPy

APIs & Data: RESTful APIs, Redis, Firebase

Databases: PostgreSQL, MySQL, MongoDB

Tools & Platforms: Docker, AWS, Git, Linux, Postman, CI/CD

Practices: Agile/Scrum, Test-Driven Development