

Katherine Shen

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(443) 766-2382

EDUCATION

Georgia Institute of Technology

Bachelor's of Science in Computer Science

Atlanta, GA

Aug 2020 – May 2024

Concentration: Graphics & Systems Engineering/Networking

Courses: *Algorithm Design, Computer Graphics, Computer Architecture, Applied Combinatorics, Objects & Design, Discrete Mathematics, Data Structures & Algorithms, Object-Oriented Programming, Linear Algebra*

EXPERIENCE

Vertically Integrated Projects

Atlanta, GA

Getting to Know U - Provost Data Dashboard Design

Aug 2022 – Present

- Analyzed Georgia Tech population distribution across different majors, credit hours, graduation rates, etc
- Iterated and improved existing dashboard designs already in the provost system
- Performed UX audits and built design systems to create dashboards for new datasets

Georgia Tech Research Institute

Atlanta, GA

Research Assistant

Aug 2022 – Present

- Transitioned emergency procedure manual iPad application to React webpage with newer features
- Developed Python script to parse styling information from Excel sheet database in order to render on webpage
- Added features to enhance user experience, such as allowing users to add, remove, or edit emergency manuals

Georgia Tech Research Institute

Atlanta, GA

Research Software Engineering Intern

May 2022 – Jul 2022

- Assisted in identifying issues with user-uploaded ML models by developing an error analysis visualization tool
- Iterated continuously on various dashboard designs and visualizations to maximize user experience with React
- Designed data architecture to allow seamless communication with database in Flask and pandas

Johns Hopkins University Applied Physics Lab

Laurel, MD

Software Engineering Intern

Jun 2018 – Jun 2020

- Reduced average time for locating parking spot on APL campus with OpenCV and image recognition
- Dispatched analyzed parking spot data to drivers gathered through mobile app
- Experimented with relationships between emotional context and television subtitles using NLP techniques
- Developed lost device tracking system with Raspberry Pi by building Pseudo-GPS system with WiFi networks

PROJECTS

MVP | *C, Gameboy Advanced, DMA*

- Created a simple game that required the user to move a sprite into the goal area in the shortest amount of time
- Implemented game logic with a state machine to correctly display game screens throughout playthrough
- Ensured smooth transitions and animations within the game by utilizing DMA

gameletttr | *Python, Websockets, Event Handling, REST APIs*

- Provided quick tournament lookup information for regional and global events through Discord bot
- Consumed Riot Games Esports API to get accurate, live tournament information
- Utilized formatting algorithms with data structures to display information sent to Discord using `discord.py`
- Developed a scheduler to deliver notifications with a stream link for upcoming matches for ease of viewing

Energy Consumption Analysis (2020 HackGT 7) | *Dash, Plotly.js, pandas, NumPy*

- Built to a decision tree anomaly detection model built to detect energy usage anomalies
- Visualized data output by from decision tree using Plotly graphs and a Dash app

SKILLS SUMMARY

Programming: Python, Java, JavaScript, HTML/CSS, TypeScript, C, \LaTeX , Assembly (LC-3)

Tools: Figma, Notion, Trello, Git, Adobe Photoshop

Technologies: Websockets, API, Event Handling, React, Flask

Languages: English (native), Chinese (fluent)