

# Katherine Shen

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(443) 766-2382

## EDUCATION

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### Georgia Institute of Technology

*Bachelors of Science in Computer Science*

Atlanta, GA

*Aug. 2020 – May 2024*

**Concentration:** Media/Graphics & Information Internetworks

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

### River Hill High School

*High School Diploma (Rank 5/298)*

Clarksville, MD

*Sep. 2016 – May 2020*

## EXPERIENCE

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### Georgia Tech Research Institute

*Research Software Engineering Intern*

Atlanta, GA

*May 2022 – Aug 2022*

- Helping users identify issues and adjust machine algorithms efficiently by developing an error analysis visualization tool for machine learning models using React, Flask, and Pandas

### Johns Hopkins University Applied Physics Lab

*Computer Science ASPIRE Intern*

Laurel, MD

*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

## EXTRACURRICULARS

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### GT Esports

*Vice President, Head of Creative Department, Treasurer*

Atlanta, GA

*Sept. 2020 – Present*

- Restructured organization by interviewing/onboarding new staff and creating new procedures
- Boosted and promoted member engagement by implementing policies to increase member participation
- Managed creative team of 7 creating website, social media, and game-specific designs
- Integrated creative department into game sub-organizations to produce ad-hoc graphics for large events
- Managed budget and allocated funds for competitive teams, various events, and organization costs

## PROJECTS

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### gamelettr | *Python, Websockets, Event Handling, REST APIs*

Jul. 2021

- 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*

Oct. 2020

- Contributed 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

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**Languages:** Python, Java, JavaScript, HTML/CSS,  $\text{\LaTeX}$

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

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