

# Colin J. Hartigan

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## Objective

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Computer engineering major, concentrating in computing hardware, emerging architectures, and embedded devices. Seeking a software engineering internship for May - August 2023.

## Education

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**Georgia Institute of Technology**, Atlanta, GA

Bachelor of Science in Computer Engineering, GPA 3.42/4.0; Dean's List

*August 2022 - Present*

Expected Graduation, May 2026

## Skills

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**Programming & Frameworks:** Python (Flask, PyTorch, NumPy), JavaScript (React, Material UI), HTML/CSS (TailwindCSS), C++ (Arduino), Lua

**Hardware:** Raspberry Pi, Arduino

**Software:** Visual Studio Code, GitHub, Arduino IDE

**Languages:** English (native), Spanish (conversational)

## Experience

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**The Hive Makerspace**, Georgia Tech, Atlanta, GA

*Student-run workspace for engineering projects*

**Peer Instructor**

*January 2023 – Present*

- Instruct and assist students in operating tools and machinery, maintain space and equipment
- Operate and maintain 3D printers, laser cutters, electronics workstations, workshop tools

**Johns Hopkins Applied Physics Laboratory (APL)**, Laurel, MD

*Nation's largest university research center supporting U.S. government technology development programs and national priorities*

**ASPIRE High School Intern, Space Exploration Sector**

*October 2021 - May 2022*

- Researched and built artificial intelligence systems, utilizing weather satellite data, to predict and visualize the spread of water-borne illnesses
- Leveraged multithreaded concurrent programming in Python to increase efficiency of data processing using Pandas (data analysis library)
- Trained AI model with TensorFlow machine learning platform

**ASPIRE High School Intern, Research and Exploratory Development Department**

*October 2020 - May 2021*

- Wrote CNC G-code parsing and visualization software in Python for circuit-producing, additive manufacturing printer
- Filed an intellectual property disclosure at APL due to originality and utility of software as a debugging tool

**Sandy Hill Camp and Retreat Center**, North East, MD

*Regional youth outdoor summer camp focused on team building and skills development*

**Counselor**

*Summer 2021 & 2022*

- Supervised and led groups of 12 pre-teenagers at weeklong sleep-away camp
- Taught courses in team building, outdoor skills, music, and sports to 20-30 students

## Projects

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**VALORANT Inventory Manager**

*September 2021 – Present*

*Application for the video game VALORANT used to manage a user's inventory of virtual cosmetic items. Implements additional features not found in the game including cosmetic randomization and a more intuitive user interface/experience.*

- Identified community's desire for improved customization
- Developed full-stack solution as solo developer (JavaScript and Python)
- Maintain codebase and support users facing issues with app
- 240,000+ downloads, 20%+ user retention rate, global userbase (< 10% of users reside in United States)

## Notable Coursework

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**Digital System Design:** Switch and gate design, Boolean algebra, number systems, datapath, instruction set architecture

**Linear Algebra:** Eigenvalues, eigenvectors, applications to linear systems, least squares, diagonalization, quadratic forms