

# Joseph Campbell

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## Education

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### Georgia Institute of Technology

Expected graduation May 2025

Bachelor of Science in Computer Science

GPA: 4.0/4.0

Bachelor of Science in Mathematics

## Experience

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### Georgia Tech Research Institute

May - August 2022, January - August 2023

Cloud Development Co-op, CIPHER/SIS CED Team

- Updated software binaries in AWS S3 for desktop apps and rewrote relevant Ansible processes.
- Automated procedure for extracting .msp files for future Office Suite patching using Powershell.
- Debugged AppLocker group policies and revised GPOs to reflect new software updates.
- Applied updated STIGs for Office Suite and validated current hardening processes.
- Wrote and consolidated documentation for above updating/patching processes for future usage.

### Art of Problem Solving Inc.

March 2021 - August 2023

Teaching Assistant and Grader in Mathematics and Python

- Answered inquiries for over 200 students during online weekly lectures.
- Graded student responses to proof problems and gave thorough feedback.

## Research and Projects

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### Vertically Integrated Project, Georgia Tech

August 2023 - Present

- Worked on the Extreme Events team to simulate effects of disasters on key infrastructure.
- Gathered and cleaned ground acceleration data from the 2023 Turkey earthquake and aftershocks.
- Wrote parallelized MATLAB scripts to run on TACC Frontera supercomputer on earthquake data.

### Music Genre Classification, CS 4641, Georgia Tech

October - December 2023

- Analyzed dataset of 1700 spectrograms of English songs across 16 distinct genres and subgenres.
- Evaluated performance of various supervised and unsupervised ML models such as RF and SVM.
- Achieved an accuracy of over 70% using CNN, with most errors occurring on similar genres.

### HackGT 9, Georgia Tech

October 2022

- “Weather or Not” is an extension for Google Calendar that adds weather data into event creation.
- Uses multiple APIs to pull weather, daylight, and geolocation data of the user or the event.
- Weather pop-up is seamlessly integrated into Calendar without interfering with existing features.

## Awards and Honors

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- Ranked Top 500 Nationally, Putnam Competition February 2023
- Honorable Mention, Mathematical Contest in Modeling February 2021
- Faculty Honors, Georgia Tech December 2021 - Present
- 1st place, GT Fitness Challenge, Open Division April 2023

## Skills

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**Software:** Java, Python, R, C, C++, MATLAB, Ansible, AWS, Agile, Assembly, Docker

**Languages:** English (native), Russian (advanced), Spanish (intermediate)

**Coursework:** Machine Learning, Statistics, Artificial Intelligence, Object-oriented Programming, Data Structures and Algorithms, Multivariable Calculus, Mathematical Modeling, Computer Organization, Discrete Math, Systems and Networks, Real Analysis, Complex Analysis