

Theo Gerst

Computer Science and Math @ MIT

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Website: teo67.github.io
Portfolio: github.com/teo67

Personal Projects

Radish

[\[https://github.com/teo67/Radish\]](https://github.com/teo67/Radish)

FEBRUARY 2022 - OCTOBER 2022

Radish is a custom programming language designed for readability and simplicity. Dynamically typed, interpreted, and written in C#. The Radish [language extension](#) for VS Code is also open source.

Discits

[\[https://github.com/teo67/DiscitsPublic\]](https://github.com/teo67/DiscitsPublic)

FALL 2020 - FEBRUARY 2022

Discits is a structurally sound implementation of Pokémon written in Node JS that functions entirely via a messaging service. [Here](#) is the link to the website, along with its [source code](#).

Other Relevant Projects

LID programming language

[\[https://github.com/teo67/lidPublic\]](https://github.com/teo67/lidPublic)

OpenGL-based render engine

[\[https://github.com/teo67/MaybeRenderer\]](https://github.com/teo67/MaybeRenderer)

Game-solver in JavaScript

[\[https://github.com/teo67/SimpleAI\]](https://github.com/teo67/SimpleAI)

Custom data structures in C#

[\[https://github.com/teo67/CustomTypes\]](https://github.com/teo67/CustomTypes)

Customizable chess in Radish

[\[https://github.com/teo67/radish-chess\]](https://github.com/teo67/radish-chess)

Programmatic Sound Designer

[\[https://github.com/teo67/sound_designer\]](https://github.com/teo67/sound_designer)

In Development:

Open-World RPG "Rain" in UE5

Custom Raspberry PI OS

Robotics Controls Performance

FIRST Robotics Autonomous Award

SACRAMENTO REGIONAL, 2022

Selected out of 43 teams for exceptional automated features and performance.

FIRST Robotics Innovation in Control Award

SACRAMENTO REGIONAL, 2023

Selected out of 46 teams for elegant controls systems and robot automation.

Experience

UC Berkeley Model Predictive Control Lab / Intern

SUMMER 2023

Developed code in C++ and python using ROS to simulate and control 6-DOF robot arms autonomously. Implemented translation and rotation procedures as well as force sensing in order to use the arm to draw image contours, and ran custom simulations to predict robot behavior.

BHS Robotics Team / Controls Co-Lead

FALL 2019 - SPRING 2023

Wrote robot code for two FRC seasons as a controls lead.

Experience @ MIT

MIT Motorsports / Software Team

FALL 2023 - CURRENT

Focused in developing low-level firmware written in C/C++. Developed telemetry system to visualize car data in real time over serial, driver dashboard to receive and display data over CAN, and code for custom motor inverters for 4WD.

MIT Arcturus / Autonomy Lead

FALL 2023 - CURRENT

Focused in robot control using ROS2 python and C/C++. Developed [path generator algorithm](#), e-stop/heartbeat system, custom x-drive 6-axis PID controller.

Summer Internships/Academics

COSMOS - Computers in Bio and Robotics / Student

JULY 2022 - AUGUST 2022, University of California at Davis

Stanford Pre-Collegiate Summer Institutes / Student

JULY 2021 - AUGUST 2021, Online due to COVID

Rosetta Institute of Biomedical Research / Student

JUNE 2021 - JULY 2021, University of California at Berkeley

Education

Berkeley High School

FALL 2019 - SPRING 2023 (GPA: 4.0)

1980 Allston Way, Berkeley, CA, 94704

Massachusetts Institute of Technology

FALL 2023 - SPRING 2027 (GPA: 5.0)

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