

# Corrado Mazzarelli

(845) 249-9944

[corrado@mazzarelli.biz](mailto:corrado@mazzarelli.biz)

[www.corradomazzarelli.com](http://www.corradomazzarelli.com)

<https://github.com/CorMazz>

## Education

May 2024

**Georgia Institute of Technology**

Master of Science

Aerospace Engineering

GPA – 4.0/4.0

May 2021

**Rensselaer Polytechnic Institute**

Bachelor of Science

Aerospace Engineering &

Mechanical Engineering

GPA – 4.0/4.0

## Languages & Frameworks & Tools

Python, Rust, JavaScript

TypeScript, VBA

SQL (Postgres, SQLite)

Docker

Git, Github Actions

Excel/PowerPoint/Word

Full Stack Development

Bootstrap & Tailwind CSS

React

Linux

SDLC

Basic Spanish/Italian

## Professional Experience

### General Electric Vernova

#### Combustion Software Engineer

2024 – P

- Created 7 Python libraries with CI pipelines for docs, linting, and testing to automate CFD case submission, increasing case throughput by 11x
- Established a robust test-driven development workflow, lowering incidence of bugs that cost >12k CPU hours from 2/day to ~0.5/week
- Reduced human errors and case submission time by 10x, enabling rapid iteration on design to fulfill Department of Energy grant requirements
- Rescued a \$4.5M project by applying automation and software to pass key technical challenges; recognized for driving innovation and project success

#### Combustion Aero Design Engineer

2023 – 2024

- Primary developer for Python tools to automate data collection/analysis for novel H2 combustor research and design – created libraries with unit testing, coverage reports, automatic documentation generation, linting for code format standardization and GitHub actions
- Led full-day, \$100K+ combustor performance tests and developed Python tools to standardize time-series analysis of millions of data points, previously unmanageable in Excel
- Pioneered new capability by developing a Python library to automate combining video compilation and data plotting for tests, reducing engineer touch time on videos by 70%
- Developed infrared camera data post-processing Python script, automating the task and reducing touch time from 5hrs/test to seconds

#### Python Boot Camp Architect/Professor

2023 - P

- Developed curriculum and taught a 20-hour course to 60+ GE employees
- Leading implementation of auto-grader software, setting up services to host year-round learning material

#### Edison Engineering Development Program

2021 - 2023

- Developed Python computer vision software using OpenCV to detect and measure crack growth in composite materials, providing \$50,000 in value

## Freelance Experience

### Greenville Westies

#### Lead Developer

2024 – P

Application accessible via [www.corradomazzarelli.com](http://www.corradomazzarelli.com)

- **Dancexam** – Built a containerized, production web application in Rust (full-stack using Axum, Askama, HTMX, Tailwind) with a CI/CD pipeline (GitHub Actions), JWT auth, and unit tests, for proctoring dancer tests
- Prioritized SDLC by collecting stakeholder requirements, designing for extensibility, and improving per user feedback