# Carson J. Radtke

GitHub: carsonRadtke
Computer Science and Mathematics Double Major https://nosrac.me

## Experience

***Ground Tool Compiler Engineer*** – *Astronautics* | Oak Creek, WI (Jun 2021 to Present)

- Design a proprietary programming language to meet the needs of the user base
- Develop all layered components of a compiler (scanner to code generation)
- Use ANTLR to transform text into a parse tree

***Software Development Intern*** – *CaraFlow* | Milwaukee, WI (Jan 2019 to Jun 2021)

- Wrote production .Net software for hospitals across the country
- Architected a full-stack solution to help businesses to track sanitization history
- Developed an IoT solution to display information about sensors to an E-Paper display
- Managed Azure resources (App Services, Cosmos DBs, VMs, SQL Databases)

**CEAS Tutor** – *University of Wisconsin, Milwaukee* | Milwaukee, WI (Aug 2019 to Dec 2020)

- Tutored students in UWM's College of Engineering and Applied Science
- Subjects include CompSci, Math, Physics, Stats
- Courses include Algorithms, Calc I-III, Calc Physics 1 & 2, Data Structures, Discrete Math, Linear Algebra, Programming Languages, Statistics

## Education

University of Wisconsin, Milwaukee | Milwaukee, WI (Fall 2018 to Spring 2021)

B.S. Computer Science (GPA: 3.811)

- Electives: Compilers, Computer Graphics, Machine Learning

B.A. Mathematics (GPA: 3.408)

- Electives: Abstract Algebra, Chaos Theory, Real Analysis

Overall GPA: 3.653/4.000

## Projects

*Mathematical Contest in Modeling 2021*

- Goal: Use the provided data to develop a model that measures musical influence
- Used Gephi to analyze an influence network between popular music artists
- Wrote algorithms in Python to develop measures of music similarity

*SCUDEM V 2020 Challenge*

- Goal: Use differential equations to model dispute resolution strategies in refugee camps
- Used Python to predict how these strategies change with respect to time

*NASA Astronomy Picture of the Day (APOD)*

- Used .Net to create a Windows Service that updates a user's background to the APOD
- Created a Discord bot the serves NASA's astronomy picture of the day using NASA's public API

*Personal Website* (https://nosrac.me)

- Wrote a website with links to my resume and social media
- Site is self-hosted on a custom-built Windows machine

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