Carson Radtke

Computer Science Graduate Student at UWM

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ADDRESS

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OBJECTIVE

I am interested in compiler engineer roles or roles involving the design and implementation of compilers. I have industry experience as both a software developer and a compiler engineer as well as leadership experience as a tutor and mentor for engineering students.

WORK EXPERIENCE

Compiler Engineer
Astronautics

(July 2021 - Present)

As a compiler engineer at Astronautics, I am responsible for the design and implementation of a domain specific language that compiles to a proprietary instruction set. I built the compiler from the ground up and I implement algorithms for all phases of the compiler (lexer, parser, analyzer, generator) including writing test cases using a hand-build test suite to validate compiler correctness.

Software Development Intern
CaraFlow

(January 2019 - June 2021)

As a software development intern at CaraFlow, I was responsible for writing software in a variety of projects. I implemented features and bug fixes for legacy software that runs in over half of hospitals nationwide. I wrote drivers and implemented REST APIs to allow e-paper devices to update their displays wirelessly. I was tasked with architecting and managing the cloud services architecture for multiple projects using Microsoft Azure.

CEAS Tutor
University of Wisconsin, Milwaukee

(July 2019 - December 2020)

As a tutor for the College of Engineering and Applied Science at UWM, I worked with students to help them further their understanding in Computer Science, Mathematics, and Physics courses. Classes that I tutored include Algorithms, Calculus, Data Structures, Discrete Mathematics, Programming Languages, Statistics, and Theory of Computation.

EDUCATION

University of Wisconsin, Milwaukee
Master of Science Computer Science

(September 2021 - Present)

Specialty: Compiler Design & Programming Language Theory

University of Wisconsin, Milwaukee
Bachelor of Science Computer Science

(September 2018 - May 2021)
Department GPA: 3.811

Electives: Compilers, Computer Graphics, Computer Security, Machine Learning

University of Wisconsin, Milwaukee
Bachelor of Arts Mathematics

(September 2018 - May 2021)
Department GPA: 3.408

Electives: Abstract Algebra, Chaos Theory, Real Analysis, Statistics

PROJECTS

Personal Website
https://nosrac.me

I built my personal website using JavaScript (with JQuery) and Bootstrap and it contains links to various professional social media as well as my resume. It is hosted on an instance of Microsoft Azure's Static Web App.

ModelGen
https://github.com/carsonRadtke/ModelGen

I enjoy playing around with public APIs, but creating typed models for responses can be a hassle. To solve this issue, I created a program built on ANTLR to parse JSON output and generate a C# class file containing model definitions for the API response. All that is required for the program is a URL to the endpoint and it outputs the C# model.

NASA APOD Projects
https://github.com/carsonRadtke/nasa_apod_background

I utilized NASA's public Astronomy Photograph of the Day (APOD) API to write a program for both Windows and OS X to change the user's desktop background on a daily basis. I also used the same API to create a Discord bot that displays information about the current photograph of the day.

LANGUAGES

English
Native

Spanish
Intermediate

Russian
Basic

AWARDS

Magna Cum Laude
University of Wisconsin, Milwaukee

May 2021

Awarded to students who achieved a cumulative GPA above 3.65 in their undergraduate studies.