Carson Radtke

Software Engineer

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⯂ carsonRadtke

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I'm Carson Radtke, a software engineer with a passion for developing innovative and secure solutions. I graduated magna cum laude from the University of Wisconsin, Milwaukee, with a B.S. in Computer Science and a B.A. in Mathematics. Currently, I work at CodeSecure, where I enhance the CodeSonar product, a leading static analysis tool for C and C++ code. Previously, I led a compiler project at Astronautics, where I developed a compiler for a proprietary machine for commercial aircraft.

WORK EXPERIENCE

CodeSecure (Sep 2021 - Present)
Software Engineer | Full-Time

I am a member of the CodeSecure team, focusing on enhancing the CodeSonar product. My role is within the Front End team, where I extend the C++ Front End provided by EDG to boost the effectiveness of our static analysis engine.
Responsibilities:

- Achieved 100% coverage of CERT C/C++ coding standards by implementing a range of static analysis checkers.
- Introduced a feature to optimize disk usage, a crucial feature for transforming CodeSonar into a SaaS offering.
- Contributed to the bifurcation of the front end allowing CodeSonar to scale with distributed build systems.
- Implemented checkers for popular coding safety standards including AUTOSAR, MISRA, CERT, and JSF++.
- Converted an AI research paper concerning software de-bloating into a production ready solution for the Navy.
- Mentored new employees to get them up to speed and help them become effective contributors.
- Supported customers to help them resolve their technical issues.

Skills: C++, Mentoring, Python, Research, Static Analysis

🔗 https://www.codesecure.com

Astronautics (Jun 2021 - Sep 2021)
Compiler Engineer | Contract

I led a significant compiler project tasked with creating a compiler for a proprietary machine designed for commercial aircraft applications.
Responsibilities:

- Designed all facets of the compiler, from the lexer and parser to the analyzer and code generator.
- Established CI/CD automation for regression testing, static analysis, and package deployment.
- Collaborated in the development of an in-browser IDE using the React and the Monaco Editor.
- Engaged with stakeholders to comprehend their requirements and fine-tuned the compiler to align with needs.

Skills: CI/CD Implementation, Compiler Development, NPM, Project Management, TypeScript Programming

🔗 https://www.astronautics.com

CaraFlow (Jan 2019 - Jun 2021)
Software Developer | Intern

During my internship at CaraFlow, I was actively involved in diverse projects, including their legacy product, Qyk, and multiple startup initiatives.
Responsibilities:

- Successfully orchestrated the migration of an on-premise SQL Server instance to an Azure Cosmos DB solution.
- Contributed to both hardware and software research and development of an E-Paper product for hospital use.
- Maintained and enhanced a legacy .NET data capture solution widely utilized by hospitals across the US.
- Collaborated with hospitals to identify their requirements and propose solutions to address their challenges.
- Designed a cloud-based solution for provisioning, monitoring, and analyzing IoT devices.
- Utilized the Ionic Framework and Angular to craft a cross-platform mobile app for inventory management.

Skills: Angular Development, C# Programming, Ionic Framework, Microsoft Azure, TypeScript

🔗 https://www.caraflow.com

EDUCATION

University of Wisconsin, Milwaukee	(Sep 2018 - May 2021)	University of Wisconsin, Milwaukee	(Sep 2018 - May 2021)
B.S., Computer Science		B.A., Mathematics	
Compilers, Computer Security, Machine Learning		Algebra, Analysis, Chaos Theory, Statistics	