

# Spencer C. Imbleau

He/Him

@ **BLUE ORIGIN** 

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## Education

### Bachelor of Science, Electrical Engineering

*The University of Toledo, ABET Accredited*

Aug 2017 – Dec 2021

Toledo, OH, USA

- IEEE President
- TA of First Year Design Course
- Global Public Health Brigades President

### Bachelor of Science, Computer Science and Engineering

*The University of Toledo, ABET Accredited*

Aug 2017 – Dec 2021

Toledo, OH, USA

- ACM Vice-Chair
- TA of Intro to Object Oriented Programming Course
- Young Entrepreneur Society Treasurer

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## Career

### Pre-Feature Owner

*Ford Motor Company*

Oct 2022 – Present

Dearborn, MI, USA

- Responsible for new EV feature from ideation to development
- Developed HARA, DFMEA, and other documentation for new EV feature

### V2X Feature Development and Innovation Engineer

*Ford Motor Company*

Feb 2022 – Sep 2022

Dearborn, MI, USA

- Ideated and further developed new features in Stationary Moments and Commercial Electrification
- Researched and developed future features implementing blockchain technology
- Product Manager of Charge Assist

### Autonomous Driving Development Intern

*Hyundai-Kia America Technical Center, Inc.*

May 2021 – Aug 2021

Ypsilanti, MI, USA

- Assisted with validation and troubleshooting for 17M dollar Tampa V2X pilot
- Created documentation and test plans for 5 new V2X applications
- Assisted with validation and troubleshooting of ADAS features

### Electrical Engineering Intern

*The Wooster Brush Company*

May 2019 – Aug 2019

Wooster, OH, USA

- Updated drawings of 6 legacy machines with safety improvements
- Troubleshot software incorporating sensors, IR cameras, and robots

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## Competencies

🔗 **Primary Languages:** Python, C/C++, Rust, MATLAB

🔗 **Content Management:** Git, GitHub, GitHub Actions

🗄 **Databases:** SQL, DynamoDB

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## Research, Publications

### Understanding Hardware-Accelerated 2D Vector Graphics

Jun 2021 – Apr 2022

*with R. Mitchell Parry, Ph.D.*

*Boone, NC, USA*

- Publicly defended at the Cratis D. Williams School of Graduate Studies, April 4th, 2022
- A data collection and visualization framework for 2D vector graphics, in Rust
- FFI Integration with NVIDIA® Tools Extension SDK (NVTX) for GPU metric sampling
- Analysis of competing algorithms and approaches for compute-centric vector rendering

### Creating A Game Engine From Scratch

Aug 2018 – May 2019

*with William C. Krehling, Ph.D.*

*Cullowhee, NC, USA*

- A full implementation of a 2.5D perspective game engine with zero libraries or dependencies, written in Java
- Calculus-based physics implemented from scratch using the separating axis theorem
- Networking reliability and security built on UDP at the application level of the OSI model
- Software rendered with support for affine transformations and native shaders
- Additional module handling of input, sound, and lighting

### Kubernetes at Home

Apr 2022 – Present

- A mono repository for my home infrastructure and K3S kubernetes cluster
- Managed with Ansible, Terraform, Flux, Renovate, GitHub Actions
- Adherence to Infrastructure as Code (IaC) and GitOps practices

### My Research Blog

Dec 2021 – Present

- An open source initiative to provide free and insightful information
- A landing for complex research, focusing mainly on Rust, Cloud, and GitOps

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## Certifications

CKA, Certified Kubernetes Administrator

Dec 2022

243-3 Master Console Operator for NASA Space Launch System

Jan 2022