Spencer C. Imbleau He/Him

@ BLUE ORIGIN

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Education

Bachelor of Science, Electrical Engineering Aug 2017 – Dec 2021
The University of Toledo, ABET Accredited *Toledo, OH, USA*

- IEEE President
- First Year Design Course Teaching Assistant
- Global Public Health Brigades President

Bachelor of Science, Computer Science and Engineering Aug 2017 – Dec 2021
The University of Toledo, ABET Accredited *Toledo, OH, USA*

- ACM Vice-Chair
- Intro to Object-oriented Programming Course Teaching Assistant
- Young Entrepreneur Society Treasurer

Career

Pre-Feature Owner Oct 2022 – Present
Ford Motor Company *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 Feb 2022 – Sep 2022
Ford Motor Company *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 May 2021 – Aug 2021
Hyundai-Kia America Technical Center, Inc. *Ypsilanti, MI, USA*

- Assisted with validation and troubleshooting for $17 million Tampa V2X pilot
- Created documentation and test plans for five new V2X applications
- Assisted with validation and troubleshooting of ADAS features

Electrical Engineering Intern May 2019 – Aug 2019
The Wooseter Brush Company *Wooster, OH, USA*

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

Skills

Atlassian: Jira, Confluence
Automotive: ISO26262-FuSa, DFMEA, CANoe
CI/CD: GitHub Actions
Collaboration Platform: Figma, Miro, Bluescape
Content Management: Git, GitHub
Databases: GraphQL, SQL, DynamoDB
OS: Windows, Linux, macOS
Primary Languages: Python, C/C++, Rust, MATLAB
Systems Engineering: MagicDraw

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. Kreahling, 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

Certifications

CKA, Certified Kubernetes Administrator Dec 2022
243–3 Master Console Operator for NASA Space Launch System Jan 2022