Spencer C. Imbleau He/Him

@ BLUE ORIGIN

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Education

Master of Science, Computer Science Aug 2020 – May 2022
Appalachian State University, ABET Accredited *Boone, NC, USA*
- Concentration in Systems
- Summa Cum Laude Honors

Bachelor of Science, Computer Science Aug 2015 – May 2019
Western Carolina University, ABET Accredited *Cullowhee, NC, USA*
- Minor in Mathematics
- National Honor Laureate

Career

Software Engineer II Nov 2022 – Present
Blue Origin *Cape Canaveral, FL, USA*
- Current employment under NDA

Software Engineer II Sep 2021 – Nov 2022
NASA, National Aeronautics and Space Administration *Kennedy Space Center, FL, USA*
- Software engineering of data procesing and provosion systems of Artemis I, Artemis II
- Deployment and installation of a production, bare-metal RKE2 Kubernetes cluster
- Kubernetes administration and deployment for DevOps and Information Architecture
- Design reviews and analysis tasks for the Space Launch System
- Certified master console operator for the Space Launch System

Lead Research, Teaching Assistant Aug 2020 – Aug 2021
Appalachian State University, Computer Science Department *Boone, NC, USA*
- Performed granted research in vector image modelling and data collection in Rust
- Fully engineered GPU metric sampling tools targeting NVIDIA hardware
- Instructed undergraduate computer science lectures and laboratory exercises

Systems Engineer I May 2019 – Jun 2020
Ingles-Markets, Inc. *Black Mountain, NC, USA*
- Received highest possible annual performance review rating, 2019
- Developed accessible technologies such as training kiosks, time clocks, and VNC portals for over 20,000 employees and 200 retail stores
- Led an initiative of better practice in automation, automating hundreds of routine tasks with safety and reliability
- Unix systems administrator for over 200 production RHEL servers
- Triage for Unix and Linux systems as the highest tier of support
- Routine onsite data center backups and storage engineering

Competencies

</> **Primary Languages:** Rust, Python, TypeScript, Java
🔤 **Human Languages:** English ★★★★, Danish ★⯨☆☆
⑂ **Content Management:** Git, GitHub, GitLab, Artifactory, DockerHub, AWX
🐳 **Systems Engineering:** Kubernetes, Docker, Ansible, Terraform, Flux, Kustomize
🐙 **CI/CD:** GitHub Actions, GitLab CI
🗄 **Databases:** Redis, PostgreSQL, DynamoDB

Research, Publications

Understanding Hardware-Accelerated 2D Vector Graphics
with R. Mitchell Parry, Ph.D.

Jun 2021 – Apr 2022
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
with William C. Kreahling, Ph.D.

Aug 2018 – May 2019
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