Spencer C. Imbleau He/Him

@ BLUE ORIGIN

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Education

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

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

Career

Software Engineer II   Nov 2022 – Present
🖫 *Blue Origin* ∞ Confidential Employment   *Cape Canaveral, FL, USA*
  - Research software and systems engineer for Blue Ring
  - Delivered software to audit rocket engines critical for engine delivery
  - Received highest possible annual performance review rating, 2023

Software Engineer II   Sep 2021 – Nov 2022
🖫 *NASA, National Aeronautics and Space Administration*   *Kennedy Space Center, FL, USA*
  - Software engineering of data processing and provisioning systems for Artemis I & 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

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Competencies

🔤 **Human Languages:** English ★★★★, Danish ★⯪☆☆
</> **Primary Languages:** ® Rust, 🐍 Python, ☕ Java, JS Various Web Languages
☁ **Cloud:** aws AWS, ⚙ Certified Kubernetes Administrator, 🐳 Docker
🏭 **DevOps:** ⌨ GitHub Actions, 🦊 GitLab CI, Ⓐ Ansible, ⌇ Terraform, Artifactory
🖌 **UI/UX:** ⬡ Figma, ⚛ React
🗄 **Distributed Data:** ⬡ GraphQL, 🐘 SQL, Redis

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