

Dakota Vaughan

Software Engineer

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Education

B.S. Computer Science; Minor in Human-Computer Interaction; Minor in Design, Tech, and Creative Expression

Virginia Tech, Blacksburg VA

August 2022 - May 2026 (anticipated)

GPA: 3.47

Relevant Courses

Data Structures and Algorithms, Intro to Computer Organization, Software Design and Data Structures, Foundations of Engineering, Linear Algebra, Calculus of a Single Variable, Foundations of Physics

Skills

Object Oriented Programming (Java, GML, C, GDScript, C#), Data Structures and Algorithms, 8+ Years of Hobby Game Development Experience, Unit Testing, Code Commentation and Documentation, Iterative Design and Engineering

Projects

Fell - Solo Hobby Game Project | Precision Platformer

<https://www.dakotavaughan.com/#fell>

- Created the entire game from the ground up in between classes and schoolwork
- Programmed the UI and backend systems for a settings menu with customizable keybindings
- Created an auto-tiling system that cut level design time drastically
- Implemented programmatic visual effects like a palette system, particle effects, and GUI effects
- Worked with a music artist to implement a soundtrack

Uh Oh, UFO! - Team Game Jam Project | Arcade Run and Gun

<https://www.dakotavaughan.com/#uh-oh-ufo>

- Collaborated closely with an interdisciplinary team consisting of a producer, two visual artists, one musician, a sound artist, and one other programmer to make a finished product in under one week
- Engineered gameplay systems including player control, enemy AI, an enemy spawning system, and a difficulty scaling system.
- Ranked in the top 11% of 910 submissions to the "Opera GX Game Jam".

The Hero - Team Engineering Project | Novel Instrument

<https://www.dakotavaughan.com/#hero>

- Teamed up with five other engineers to create a novel musical instrument that was capable of producing over 23 distinct pitches with a volume over 70 Db from two meters away
- Used an iterative process to create 6 different prototypes within a time constraint of roughly 2 weeks between each new iteration
- Maintained a design map documenting each iteration, as well as its failures, successes, and improvements.

Work Experience

Weeks of Welcome Leader - Virginia Tech New Student and Family Programs | Blacksburg, VA

Aug 2023 - Sept 2023, Aug 2024 - Sept 2024

- Collaborated with colleagues to set up and run four events for over 7,000 incoming freshmen
- Learned new skills and objectives on-site at every shift

Server - Mama Rita's Restaurant and Pub | Prince George, VA

Jun 2020 - Aug 2020

- Worked with and effectively communicated with an interdisciplinary team of cooks, bartenders, hosts, and other servers to serve restaurant patrons