

# ALAN THOMAS

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## EDUCATION

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The University of Texas at Dallas Bachelor of Science, in Computer Science May 2025

### Relevant Coursework

Advanced Data Structures, Systems Programming in Unix, Computer Architecture, Computer Graphics, Artificial Intelligence, Compiler Design, Object Oriented Design, Operating Systems, Database Systems, Embedded Computer Systems

## SKILLS

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**Programming Languages:** Java, C++, Lua, C#, JavaScript, C, Python,

**Technologies and Skills:** Windows, Linux, Git, Eclipse, jGrasp, VS Code, Object-Oriented Programming

## EXPERIENCE

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**Southern Methodist University:** Virtual Reality Developer January 2024 - Present

- **Spearheading** the development of Virtual Reality software tailored for spatial awareness research purposes.
- Leveraging expertise in **Unity Engine** and **C#** to design and implement immersive VR experiences.
- Writing clean, efficient, and maintainable code to ensure the **stability** and **scalability** of software applications.
- Implementing **optimization** techniques to enhance software **performance** and **compatibility** with VR hardware.
- Contributing to **research publications** and **presentations**, showcasing the impact of VR technology on spatial awareness studies.

**Code Ninjas:** Sensei/Teacher January 2021 – December 2021

- Teaching **hundreds** of kids the fundamentals of coding through a curriculum-based program.
- Instructing children in programming languages such as **JavaScript, Lua, C#, and C++**.
- Introduced core **programming concepts** via modular teaching style.
- Conducted **code reviews** to analyze performance and provide feedback.

## ACADEMIC PROJECTS

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**EV Cyber Security – UTDesign** August 2024 - Present

- Designing and Developing methods to **perform security assessments** for Toyota.
- Developing skills in **decoding, analyzing, and injecting** communication protocol traffic to **assess system security**.
- Developing expertise in identifying **attacks on Electric Vehicles** to ensure **robust system security**.
- Improving capabilities in **designing** and **integrating** hardware and software tools for **comprehensive security assessments** and **protocol analysis**.

### Unity Games

- Worked within a codebase with over **50,000** lines of code.
- Wrote **thousands** of lines of code to alter existing systems.
- Designed and implemented an **efficient pathing algorithm** to improve AI performance.
- Added **projectile support** to the in-game **physics engine** to simulate realistic ballistics.
- Created an **Object-Oriented progression system** to enhance player experience.