

# Alex Hu

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## EDUCATION

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### University of Texas at Austin

Austin, TX

*Bachelor of Science in Computer Science*

*Expected May 2026*

- Relevant Coursework: Data Structures, Computer Organization and Architecture, Discrete Mathematics, Operating Systems, Object Oriented Programming, Linear Algebra

### Scholarships/Awards:

- \* Texas Education Agency: Highest Ranking Graduate
- \* HACKTX 2023: Best Pitch, The Sweet Talker

## PROJECTS

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### Unity DOTS Boids | *Unity DOTS, Visual Studio, C#*

[github.com/FlabbyToes/DOTSnBOIDS](https://github.com/FlabbyToes/DOTSnBOIDS)

- Developed a simple Boids algorithm using Unity DOTS for greater performance
- Utilizes Unity Burst Compiler and Job System for incredible performance, 30x faster than standard Unity
- Based the obstacle avoidance algorithm off Sebastian Lague on YouTube
- Learned about optimization techniques that could be implemented in the future like spatial partitioning

### Unity Procedural Turtle | *Unity, Visual Studio, C#*

[github.com/FlabbyToes/procedural-turtle](https://github.com/FlabbyToes/procedural-turtle)

- Developed a animated turtle in Unity with procedural walking, tail flicking, and head aiming, plus moving shells
- Created the turtle model using Blender from scratch and it looks absolutely sick
- Discovered about what exactly procedural animation is and all the components and interesting math behind it
- Currently looking into cleaning up the code and making the shell procedurally animated

### Unity Fun Shape Game | *Unity, Visual Studio, C#*

[flabbytoes.itch.io/fun-shape-game](https://flabbytoes.itch.io/fun-shape-game)

- Created a simple 2D platformer with controllable shapes and 10 challenging levels
- Developed all aspects of the game including the cute main menu music made in FL Studio
- Discovered an interesting technique/algorithm to simulate pulsing electricity
- Learned that making 2D platformers in Unity is a pain due to ghost vertices

### Bank Heist Calculator | *Visual Studio, C#, .NET Framework*

[github.com/FlabbyToes/BankHeist](https://github.com/FlabbyToes/BankHeist)

- Developed a simple Windows Form app for HackTX that calculates time to complete a bank heist
- Has a display that generates a bank layout with a randomized maze surrounding the bank vault
- Learned more about C#, the .NET framework, Visual Studio, such as properties and controls of forms/elements
- Pitched the project for the HACKTX 2023 Hackathon and won an award the best pitch

## TECHNICAL SKILLS

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**Languages:** Java, C, C++, C#, Python, HTML, CSS, JavaScript

**Developer Tools:** Unity, Git, VS Code, Visual Studio, IntelliJ, Eclipse