

John Austin Miles

I'm a graduate student at Georgia Tech with a deep-rooted passion for software engineering and graphics programming.

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EDUCATION

Master of Science in Computer Science

Georgia Institute of Technology

08/2021 - Present

Atlanta, Georgia GPA: 4.0

Concentration: Computer Graphics

- Masters Project: Infinite Procedural Terrain Generation

Bachelor of Science in Computer Science

Georgia Institute of Technology

08/2017 - 12/2021

Atlanta, Georgia GPA: 4.0

Concentrations: Media & Modeling/Simulation

- Senior Design: Virtual Reality Tweet Viewer for the VR conference hosted by IEEE

PROJECTS

Infinite Procedural Terrain Generation (08/2021 - Present)

- Utilized C# and Unity's graph interface to build a PCG development kit for designing game worlds using biomes, erosion, and Perlin noise octaves.
- Implemented asynchronous tiling, generation, and loading of complex mesh data in realtime through compute shaders and GPU programming.
- Integrated the application into the curriculum of a Graduate course in Artificial Intelligence for gaming with 100+ students.

CleanupCoordinator (05/2018 - Present)

- Automated cleanup task assignment and verification for an on-campus organization of over 100 members.
- Reduced manual hours required for performing tasks by 10+ hours weekly.
- Utilized Twilio Texting, Google Sheets, and Amazon Web Services APIs for automated assignment and storage.

TECHNICAL SKILLS

Programming

Typescript/Javascript, Python, C#, GoLang, SQL, C/C++

Frameworks

THREEJS, Unity, Unreal Engine, Django/Flask, AWS

Concepts

Mapping Technologies, Object Oriented Programming, Functional Programming, Game Engine Development, Computer Graphics, Project Design, GPU Programming, Full Stack Development, Version Control

HONORS/AWARDS

HackGT 2019 Second Place (08/2019 - 08/2019)

National Security Agency

Faculty Honors (08/2017 - Present)

Georgia Institute of Technology

Dean's List (08/2017 - Present)

Georgia Institute of Technology

WORK EXPERIENCE

Software Engineering Intern - Autonomous Vehicles NVIDIA

05/2022 - 08/2022

Redmond, WA

Achievements/Tasks

- Designed, developed, and shipped a feature to create image tiles from map data for use in industry standard geographical tooling applications.
- Automated a procedure for concurrently processing and generating gigabytes of data on the cloud upon map data change events.
- Implemented feature end-to-end, from back-end image generation to front-end tiling and visualization.

Teaching Assistant - Computer Animation

Georgia Institute of Technology

08/2021 - Present

Atlanta, GA

Achievements/Tasks

- Collaborated with the professor to teach physics-based and kinematic animation techniques and concepts.
- Held weekly office hours, moderated online lectures, and helped students through hybrid learning platforms.
- Graded, provided feedback on assignments for a class of 75+ students.

Software Engineering Intern - Mapping MathWorks

05/2021 - 08/2021

Natick, MA

Achievements/Tasks

- Researched, documented, and prototyped feasibility of a new 3D tiles geographical rendering technology.
- Integrated MATLAB's Mapping Toolbox with Unreal Engine and developed game world simulations.
- Created interactive simulation games in Unreal Engine modeling automotive and aerospace systems.

Software Engineering Intern - Autonomous Vehicles NVIDIA

01/2021 - 05/2021

Redmond, WA

Achievements/Tasks

- Developed and delivered feature work for a 3D map editing tool from design to implementation.
- Delivered real time user telemetry gathering and visualization system for analysis and improvement of the tool.
- Extended features on 3D map visualization tool focusing on geometry optimization and performant rendering.

Software Engineering Intern - Desktop Team MathWorks

05/2020 - 08/2020

Natick, MA

Achievements/Tasks

- Delivered feature work for the interaction and architecture of the core MATLAB GUI layout framework.
- Developed new CSS architecture design pattern and corresponding internal APIs to modify framework properties.