

# Ryan Matthews

## Education

|  |                                 |                     |
|--|---------------------------------|---------------------|
| Class of 2022  | <b>Texas A&amp;M University</b> | College Station, TX |
| Bachelor of Science in Computer Science<br>Minor in Game Design and Development<br>3.863 / 4.0 GPA<br>Relevant Coursework:<br>Linear Algebra, Problem Solving Programming Strategies, Design and Analysis of Algorithms, Artificial Intelligence, Intro to Game Design, Advanced Game Design, Game Level Design, Game Development, Computer Graphics, Computer Animation, Computer-Human Interaction |                                 |                     |

## Experience

|                      |   |   |
|----------------------|---|---|
| May 2021<br>Sep 2021 | <b>AR / VR Developer</b><br><i>Soft Interaction Lab</i> | College Station, TX<br>20 - 40 hours / week |
|----------------------|---|---|

- Created a demo AR app using Unity and MRTK for the Microsoft HoloLens 2 involving gaze input, speech input, a near menu (follows the user's body), a hand menu (opens by raising hand), and object manipulation (translate, rotate, and scale using bounding box handles and hand gestures)
- Ported a medical training app, SBIRT, from the Oculus Quest 2 to the Microsoft HoloLens 2 using Unity, MRTK, and PUN 2
  - Created an input system allowing the user to position a virtual patient, snap them to the real-world floor, and fine-tune scale and rotation
  - Adjusted the PUN 2 network so that the HoloLens could successfully connect to the network and join a network room with a supervisor who controls the virtual patient
- Ported an educational human anatomy app, Human InNervate, from the HTC VIVE Pro to the Oculus Quest 2 using Unity and the Oculus Integration SDK
  - Added hand and controller tracking, dual laser pointers (for aiming and selecting with the hands or controllers), and controller vibrations
- Added networking capability to an educational canine anatomy app, InNervate VR, on the Oculus Quest 2 using Unity, the Oculus Integration SDK, and PUN 2
  - Implemented network functionalities like connecting to the network, creating new rooms on the network, joining existing rooms, and synchronizing room contents across users
  - Created an interactable lobby UI for users to manage network features

|                      |  |                           |
|----------------------|--|---------------------------|
| May 2020<br>Aug 2020 | <b>Software Engineer Intern</b><br><i>Affirmed Networks, A Microsoft Company</i> | Remote<br>40 hours / week |
|----------------------|--|---------------------------|

- Learned the structure of the 5G network and followed 3GPP specifications
- Practiced the Agile software development approach
- Implemented statistics in C++ for tracking messages and data transferred between 5G network components
- Programmed statistics to interface with Prometheus, a metric tracking software, to provide visualizations of network data to customers

|                      |  |                                   |
|----------------------|--|-----------------------------------|
| May 2019<br>Aug 2019 | <b>IT Intern</b><br><i>Affirmed Networks</i> | Richardson, TX<br>40 hours / week |
|----------------------|--|-----------------------------------|

- Developed a Python script that interfaces with the Red Hat Enterprise Virtualization environment to query hypervisor and virtual machine (VM) information as well as create, start, reboot, and destroy VMs from the Linux command line
- Developed a Python script to monitor and report on Linux file system utilization and identify the users utilizing the most storage space
- Directed reports generated by scripts to a Slack channel using the Slack API
- Performed general IT duties, including Windows 10 desktop support, laptop preparation for new employees (macOS and Windows), and setup of new employee hardware

## Personal Info

|  |
|--|
| <b>Location</b>  |
| McKinney, TX   |
| <b>Phone</b>   |
| (214) 425-8533   |
| <b>Email</b>   |
| <a href="mailto:ryanm798@icloud.com">ryanm798@icloud.com</a> |

## Portfolio

[ryanemattthews.com](http://ryanemattthews.com)

## Skills

### Programming Languages

C++  
C#  
Python

### Tools

Unity  
Unreal Engine 4  
OpenGL  
GitHub  
Jira

## Awards

President's Endowed Scholar  
Dean's Honor Roll  
National Merit Scholar