Thomas Alder

Proactive, design centered developer and content creator motivated to create beautiful and immersive applications with a hunger to increase knowledge in well-designed user experiences and professional development of 3D apps mainly in VR/AR. Current computer science senior at the University of Colorado – Boulder.

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Skills

Programming Languages/ Frameworks

C/C++/C#	Pug/Jade
Java	HTML
JavaScript	CSS
Kotlin	Lua
Python	Angular
Scala	NodeJS
SQL	

Programs

Unity	Mixamo
Blender	ZBrush
Octane Render	Linux
Adobe Suite	Windows
	macOS

Education

University of Colorado - Boulder — **Boulder, CO**
Bachelor of Science in Computer Science — Graduation Date: **May 2020**
History Minor — GPA: 3.619

Experience

Video Editing/3D Modelling Intern — **08/17-01/18**
Software Intern — **05/18-09/18**
Reality Garage — **Boulder, CO**

• 3D scanned people, cleaned up resultant model with ZBrush before animating through Adobe Mixamo and Unity developing a workflow of integrating representations of people in VR.
• Designed and developed a VR casting system using UDP between the Android based Oculus Go and Windows computer within Unity/C# successfully collaborating with a fellow intern.
• Built an accompanying admin web application using Express and NodeJS acting as a control page for numerous VR kiosks in museums and businesses. Working alongside another intern, we used HTTP requests from a Unity-based C# client to communicate with a NodeJS server on AWS continuously exchanging JSONs with updated information regarding the kiosks.
• Spent time within their VR arcade as a VR guide helping people from numerous backgrounds understand and experience VR.

Computer Graphics Intern — **05/19-10/19**
CableLabs — **Louisville, CO**

• Helped in the development of a specification regarding the standardization of 3D volumetric assets. Fact checked as well as developed appendixes regarding animation and Lua audio scripts.
• Provided a greater understanding of VR/AR, 3D formats and concepts such as FBX, ORBX, rendering, and raytracing.
• Working on a collaborative demonstration with Charter for a specification for a Display Summit being held at CableLabs in early October. The demo revolves around the idea of the progression of movie theaters over time. Leveraging pre-made 3D content, I brought the assets into Blender for clean-up and rendered them through a physically based renderer, Octane Renderer, to achieve photorealism in a synthetic 3D scene for use on multiple displays including 3DoF/6DoF VR. Work also included animating humanoid figures and lighting to create an alive, and visually stimulating environment.
• Gained exposure to workflows involving numerous, large companies by sitting and participating in remote and in-person working group meetings.

Projects

Android App Development — **10/18-12/18**

• For CSCI 3302 Robotics final project, developed an Android app built with Android Studio and Kotlin. As a team of a total of four, we created "Mr Sparkclean" using the Arduino based Sparki robot communicating to the app via Bluetooth. Worked on UI, Bluetooth communication and implementation of Dijkstra's path planning in Kotlin.

Leadership Experience — **08/18-12/18**

• Was team leader for a team of three in an WRTG 3035 project. Drafted and proposed an idea to improve CU's student portal which led to me gaining a group of two other students. I set up appointments with the clients and stakeholders of the USE project at CU, who we created student surveys on the current student portal, graphics, and case studies regarding fellow Universities student portals for. In addition, created a proposal feature mock-up of a CU Boulder Today card and complied the final consulting report with Adobe InDesign.

HackCU V — **02/19**

• On a team of three, we created a data visualization website using NodeJS and D3JS using StockX's 2019 data contest Nike vs Adidas data set. Worked on the front-end US state map and line graph visualizations.