

# Christopher Mollise

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## Education

### UNIVERSITY OF NEVADA, RENO | BACHELOR OF SCIENCE IN COMPUTER SCIENCE

MAY 2020

- Bachelor of Science in Computer Science and Computer Engineering
- Minor in Mathematics
- Program dedicated to the theory, abstraction, and design of computing systems with a C/C++ focus.

## Relevant Coursework

### COMPUTER COMMUNICATION NETWORKS

- Course designed to provide the basic principles of data communication and computer networks.
- Emphasis on understanding the OSI model and data communication at different protocol layers.
- Final project implementing and evaluating a wireless ad hoc network using ns-3 Network Simulator.

### FUNDAMENTALS OF GAME DESIGN

- Introduction to the process and technical practices used in the game design industry.
- Implementation of shader and gameplay programming in Unreal Engine.
- Completion of a full game in Unreal Engine using both the blueprint system and C++ programming.

### GAME ENGINE ARCHITECTURE

- Overview of the technical elements of a game engine as well as the game design pipeline.
- Creation of a 3D game engine using the open source Ogre graphics engine.
- Completion of a full game using Ogre and Unity.

### SOFTWARE ENGINEERING

- Study of the software development process from elicitation to implementation.
- Emphasis on different software development techniques and using a systematic engineering approach.
- Familiarity with Agile methodologies and working in a Scrum development environment.

### SENIOR CAPSTONE

- Completion of a year long senior project using an agile development approach.
- Final project entailed the creation of a professional website to automate the angel investment pitch process.
- Utilized technologies include:  
HTML/CSS, JavaScript, Vue.js, Vuex, Express, Mongoose, MongoDB, and AWS

### AUTOMATA AND FORMAL LANGUAGES

- Analyzation of the fundamentals of computing through finite state acceptors.
- Fundamental concepts include uses of grammars, languages, and machines in complex computation.
- Theory utilized in explaining the fundamental ideas of a Universal Turing Machine and its applications.

### EVALUATION OF VIRTUAL REALITY

- Evaluation of the technical and physiological problems associated with virtual reality.
- Understanding of optical aberrations and neurological effects when using VR.
- Creation of a virtual reality tour application for students with motor impairment using the Unity Engine.

### GAME THEORY

- Study of user choice and decision making using various mathematical models.
- Understanding of theoretic modeling and use of different solution concepts to find best decisions.
- Course focused on Nash Equilibrium, matrix/bimatrix games, minimax theorem, and TU/NTU solutions.

### PROGRAMMING LANGUAGES, CONCEPTS, AND IMPLEMENTATION

- Examines fundamental principles of programming languages and their implementations.
- Demonstrates key differences in languages and the process of choosing the proper language for a task.
- Projects utilizing Scheme, Prolog, ML, and Java.

### ANALYSIS OF ALGORITHMS

- Analysis and design of different algorithms and algorithm functionality and complexity.
- Use of algorithms to solve problems in various data structures such as sequences, sets, graphs, and trees.
- Algorithm design surrounding various data sets and dynamic programming.

## Professional Experience

### CHILDREN'S LEARNING ADVENTURE | SUMMER PROGRAM TEACHER

2017

- Summer program teacher for ages seven to twelve.
- Implemented curriculum focused on scientific exploration, artistic expression, and academic excellence.
- Demonstrated technology and engineering activities focused on natural phenomena.

### DELAMARE LIBRARY MAKERSPACE | MAKERSPACE TECHNICIAN

2018-2020

- Technician and consultant on a variety of product production technologies.
- Aided in the implementation, maintenance, and training of equipment including:  
3D Printers, 3D Scanners, and Laser Cutters
- Provided community consultations on a variety of software including:  
Solidworks, OnShape, Blender, Photoshop and Illustrator.

## Technical Abilities

### PROGRAMMING LANGUAGES

- Proficiency in C/C++.
- Experience with Unreal Engine, Unity, HTML/CSS, JavaScript, Vue.js,

### SOFTWARE

- Proficiency in Adobe Photoshop and Illustrator with several years of experience.
- Experienced with Blender, Solidworks, OnShape, EngraveLab, Artec Studios 12/13/14.
- Understanding of version control using Git and Github.

### TECHNOLOGIES

- Proficiency with laser cutters including the Epilog Helix and Dremel Digilab as well as 3D printers such as the LulzBot Taz 5, Stratasys uPrint SE Plus and Sintratec sintering printer.
- Proficient with 3D Scanning for 3D Printing, Modeling, and Digital Art with the Artec Eva and Spider.