

CRAIG HARRIS

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EXPERIENCE

MAY 2021 – PRESENT

LAB ASSISTANT, CLUB PRESIDENT BYU MR-LAB

Responsible for maintaining the lab and communicating with all 3rd parties. Manages official lab projects. Plans and directs weekly club meetings.

- Current project: Create a true to scale outdoor experience of BYU campus.

JANUARY 2020 – JANUARY 2021

PROJECT MANAGER, MATHISFIGUREOUTABLE.COM

I was hired to help a small company redesign and repurpose their online presence. The site was mostly a blog, but now operates as a platform to host several online courses and a membership site. The company paid for my participation in an 8-week course to fulfill this role. In addition to organizing weekly meetings and providing consultation on structural changes to the business, the bulk of my time was spent designing webpages, integrating systems, and writing video scripts. Through the course of the year our 4-person team

- Designed, wrote, & coded ~70 web pages
- Wrote, edited, and produced ~12 hours of promotional and educational video

DECEMBER 2017 – DECEMBER 2019

FULL TIME MISSIONARY, ALPINE GERMAN SPEAKING MISSION

Served as regional leader for 6 months over 10 areas covering eastern Switzerland. Fluent in German/Swiss German. Happy to serve.

JUNE 2017 – SEPTEMBER 2017

TECHNICAL INTERN, TX DEPARTMENT OF TRANSPORTATION

During my first month I entered 2 years of backlogged contract data into databases. I was then delegated a project to design and propose a new contract evaluation form to be used across Texas. This required interviewing contract workers and becoming intimately familiar with the contract utilized by our department.

- Catalogued 2 years of backlogged contract data
- Synthesized new standards for contract evaluations
- Designed, created, and presented new contract evaluation form before a Texas State Board of Division Directors. Form is in use to this day

JUNE 2020 – PRESENT

PODCAST EDITOR, THE MATH IS FIGURE-OUT-ABLE PODCAST

Edits and transcribes 10-30 minutes of audio a week. Also responsible for writing episode descriptions and publishing episodes.

EDUCATION

CS MAJOR, JUNIOR GPA: 3.5, CS CLASSES: 340, 329, 312, 240, 236, 235, 224, 142

Phi Eta Sigma member

PERSONAL PROJECTS

REALTIME EVOLUTION SIMULATOR, UNREAL ENGINE 4

This prototype simulates behavioral evolution in simple organisms. 3d-rendered chickens are provided a simple neural network that determines their actions. Newly hatched chickens inherit the neural network of their mother and have a random chance to apply one of several mutations to their neural network. Inputs nodes represent the chickens' senses, and output nodes determine the behavior of the chicken at any one time.

Currently this project runs, and the evolution of behaviors can be observed, however the project was shelved in leu of the project below.

REALTIME TRADE BETWEEN AUTONOMOUS AGENTS, UNREAL ENGINE 4

This prototype will demonstrate an AI capable of making economic decisions based upon personal desires and informed by an environment that changes based on theirs and other agents' actions. Currently, each agent uses a Goal Oriented Action Planning approach to determine their behavior. Given a goal, the AIs will formulate the appropriate (and cost efficient) actions to reach the goal. While not yet implemented, my goal for the project is for the agents to independently decide that to structure their individual lives most efficiently, they should specialize according to their skills and engage in trade.

I estimate this prototype has made 40% of the progress needed before an autonomous economy can be observed. Once accomplished, my next goal would be allowing the user to interact with the world and the agents, followed by giving the agents more human resemblance, detailed motives, and the environment more depth and realism.

THANK YOU!