# Colin Quelle

Full Stack Engineer

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## Experience

**GSE Solutions**
Full Stack Engineer
Remote
**January 2022 - Present**

- Developing a web-based application using MEAN Stack to display nuclear powerplant data to customers and internal engineers
- Creating backend methods using Node.js and Express.js to connect an Angular frontend to MongoDB database
- Utilizing Flask and Python to create a separate backend used to pull data from MongoDB and perform calculations
- Testing and hosting versions of the application on Amazon Web Services EC2 Cloud instances
- Spearheading additional products utilizing MERN Stack to simplify information storage and documentation in the nuclear powerplant industry

🔗 https://www.gses.com

**Urvin AI**
Research Intern
Remote
**August 2021 - October 2021**

- Investigated future technologies and studies involving AI music analysis and AI music generation
- Utilized various artificial intelligence libraries in Python, C++, and Javascript to extract musical data from audio files
- Compiled audio samples and documents to organize and present findings for senior software engineers

**TechWorks**
Game Development Inern
Binghamton, NY
**January 2021 - May 2021**

- Developed a 2D Space Survival Game using Unity and C# for Binghamton's Center for Technology and Innovation
- Worked Weekly with a team to coordinate gameplay and game progression elements
- Designed working Item, Inventory, Crafting, Events, and Tutorial systems that interacted with each other through the game

## Education

**Binghamton University, State University of New York, Thomas J. Watson College of Engineering and Applied Science**
Computer Science
**August 2018 - May 2021**

## Skills

| | | |
|---|---|---|
| **Javascript** | **Typescript** | **HTML** |
| **CSS** | **Angular** | **React** |
| **Node.js** | **Express.js** | **Python** |
| **Flask** | **C#** | **Java** |
| **C++** | **MongoDB** | **SQL** |
| **MySQL** | **SQLite** | **AWS** |
| **Tailwind CSS** | | |

## Projects

### Board App

- Used MERN stack and Tailwind CSS to build a task management app
- Constructed a login and registration system using JWT tokens for user authentication
- Allows for users to create task boards, drag and drop items, attach images, and set item priority

🔗 https://board-app-risw.onrender.com

### WebGL Model Loader

- Created a 3D model loader using Javascript and WebGL to render onto an HTML canvas
- Wrote shaders in GLSL to include different rendering styles

🔗 https://cquelle3.github.io/webgl-model-loader

### Tetris Clone

- Developed a clone of Tetris using Python and the Pygame library
- Built based off of the original games ruleset, keeps track of current and high scores

🔗 https://github.com/cquelle3/tetris-clone-pygame