

Work**Software Developer I** - Paycom*June 2021 - Current*

Full stack development working with Paycom's Payroll module. PHP backend work, Javascript frontend, and mySQL/FoxPro database management. Working with Paycom's largest module: payroll. Experience in navigating large codebases and a huge variety of systems.

Computer Science Mentor - UTD CS Department*Fall 2019 - Spring 2021*

Assisting Undergraduate students with C++, Java, Discrete Math, and Data Structures.

CS Summer Camp Instructor - UTD CS Outreach*Summer 2019*

Teaching one week courses of introductory-intermediate computer science to children grades 3-12.

Projects**AWS Image Rekognition Framework**

Python (boto3 API), NoSQL, CloudFormation Scripts

Worked with a team to provide cloud formation scripts for setting up AWS Rekognition services.

Automated SUTA Rate Updates

PHP, MySQL, RabbitMQ, Orchestrator Architecture

Paycom Project for automating clients' SUTA Rate Updates.

Payroll Late Submission Reminders

PHP, MySQL

Paycom Project for reminding clients of upcoming or missed payrolls.

Multidimensional Cellular Automata

C++, Unreal Engine 4

An Unreal Engine Project for making cellular automata (games of life) in generalized dimensions.

Virtual Reality Quiz

C#, Unity

Worked with a team to create quizzes for VR. One multiple choice style, one Geoguesser style.

Mobile "Pop the Balloons" Game

Java, Android Studio

A game with a scoring system and collision detection. Made with Android Studio for mobile devices.

Graduate Coursework**Computational Geometry**

LaTeX, Java (Graphics2D), Unreal Engine 4 (C++)

Study and derivations of algorithms related to geometry. Incremental Construction, Plane Sweep, Linear Programming.

Computer Graphics

Java (Graphics2D)

Bezier and B-Spline functions for curves, and line and polygon clipping algorithms. Perspectives in 3-D, and hidden-line and hidden-face elimination, such as Painter's and Z-Buffer algorithms.

Machine Learning

Python (numpy, sklearn)

The ID3 and the Nearest Neighbor algorithms. Formal models for analyzing learnability.

Virtual Reality

Unity Game Engine (C#)

In-depth overview of VR, including 3D navigation techniques, 3D selection and manipulation techniques, interaction, scenario, and display fidelity.