Patrick Dolan

UI Developer

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Upon Request

SUMMARY

- Engaged and active developer with experience building and architecting front end solutions
- Built POS and Self Checkout UIs for Sheetz in co-development with GK Software
- Sole developer for Sheetz RAP Station application using React/Electron for in store self checkout monitoring and assisting

Unable to display line. Likely issue: special character not supported.

SKILLS

Front End

Typescript, Vue, React, Tailwind, Stompjs, Vite, Node.js, threejs

Back End

Java, C#, .NET, Springboot, Electron

Embedded

ESP32, FreeRTOS, ESP-IDF, C++, PlatformIO

GK Software

Themes, Layouts, Tableaus, DSL, JavaSwing, Maven

WORK EXPERIENCE

UI Developer   Jul 2023 - Present

Highline Solutions

Sheetz

- Developed and delivered user interfaces for two Point-of-Sale (POS) systems and one Self-Checkout solution using GK Software. Collaborated closely with the GK implementation team in a co-development environment to ensure seamless integration and project alignment. (GKSoftware, Maven, JavaSwing)

Sheetz

- Architected and developed a standalone Electron application using React.js to interface with the GK Software API via two synchronized WebSocket connections. This tool provided store personnel with a dedicated dashboard for real-time status monitoring, transaction logging, and alert management for self-checkout RAP stations, directly enhancing support efficiency for Sheetz stores. (React, Electron, Typescript)

Phillip Tank and Structure

- Developed and maintained a high-performance front-end application using React, JavaScript, and HTML/CSS. Focused on creating reusable components and integrating with RESTful APIs to deliver a seamless user experience. (React)

EDUCATION

Full Stack Web Development Certificate   May 2022 - Aug 2022

Tech Elevator

B.S. in Food Science   Aug 2013 - Dec 2017

The Pennsylvania State University

Illustration   Aug 2010 - Jan 2013

The University of the Arts

PUBLICATIONS AND PRESENTATIONS

Intro to Three.js   2025

https://www.linkedin.com/posts/highline-coding-academy_big-thanks-to-patrick-dolan-for-a-great-talk-activity-73

Brief presentation with example project for building your own three.js project. Topic

include: Basic project structure

Rendering

Resizing

Scenes

"Game" Loop

Camera

Meshes/geometries

Positions/rotations

Materials/Textures

Shaders

Vertex

Fragment

Lighting

Directional/Ambient

Post Processing

Effect

Composer

Custom Shaders

User Input

Raycasters

HTML integration

(Javascript, three.js)

SIDE PROJECTS

Tamagotchi Clone 2025

Developed a Tamagotchi-style virtual pet game on an ESP32 microcontroller, programmed in C++ (Arduino framework).

Drove a monochrome OLED display via the I2C protocol to render custom pet animations, status screens, and a real-time UI.

Engineered the game logic to manage a state-based pet needs system (hunger, happiness, energy) requiring user interaction.

Implemented input via physical buttons and managed system resources to run the game loop efficiently without an OS (ESP32, C++)