

Dwayne Richard Concepcion

Full-Stack Developer • AI/3D Innovation Specialist

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Professional Profile

Full-stack developer specializing in AI-driven design automation and 3D workflows. I turn messy ideas into production-ready tools using Electron, Three.js, TensorFlow.js, and SVG geometry—bridging AI, fabrication, and real-world deliverables.

Featured Projects

Aritrova

AI-Driven 3D→2D Laser Cutting Platform

2024–Present

- AI-powered generation of customizable 3D dollhouse models (TensorFlow.js + Three.js).
- Automated 3D→2D pipeline creating laser-ready SVG panels with precision dovetail joints.
- Cross-platform Electron desktop app with GLTF/OBJ/STL export capability.
- Offline AI inference on Raspberry Pi 5 for secure, local-only workflows.

Personal Project

Grocery Planner AI

2024–Present

- Constraint-based meal planning & grocery list generation for dietary restrictions.
- Real-time Aldi price scraping to optimize cost/availability.
- React + Node/MongoDB architecture using structured JSON templates.
- Persistent storage and robust error handling for a seamless UX.

Professional Experience

State of Illinois – DoIT @ DCFS

Information Services Specialist II (Option A)

Nov 2021 – Mar 2025

- Delivered technical and analytical support for DCFS information systems & operations.
- Maintained documentation/specs for critical state databases and legacy/web systems.
- Provided Help Desk support and resolved complex issues while ensuring security/compliance.
- Collaborated across agencies to implement IT solutions supporting child welfare services.

Kemmerer Village

Foster Care Caseworker

Mar 2019 – Mar 2021

- Coordinated DCFS (SACWIS) documentation and juvenile court reports.
- Facilitated supervised parent/child visits and supported reunification efforts.

Private Contract

Professional Caregiver

Sept 2015 – Jul 2017

- Provided comprehensive in-home support for retired Indiana University professor.

Transitional Services Inc.

Direct Support Specialist

2012 – 2015

- Developed individualized training for clients with disabilities.
- Taught financial management, hygiene, and independent living skills.

Technical Skills

Programming

JavaScript (ES6+), Python, Swift, SQL, HTML/CSS, C++, Scheme, COBOL

Frameworks & Tools

React, Node.js, Electron, TensorFlow.js, Three.js, Express, MongoDB, Firebase

Design & Fabrication

SVG generation, 3D modeling, laser cutting optimization, UI/UX prototyping

DevOps & Systems

Linux, Git, Bash, Docker, Agile methods, ESM/CommonJS debugging

Certifications

First Aid, CPR, Nebraska CNA (40hr), CWEL, Nebraska Medication Aide

Earlier Projects

iOS Textbook Exchange App

- Swift (Xcode) + Firebase backend; student accounts, listings, real-time sync.

Accessibility Device Finder

- Symfony + Doctrine ORM web app filtering assistive tech by disability type.

Education

B.S. Computer Information Systems

Wayne State College, Wayne, NE

December 2018

Leadership & Volunteer

- Revived Tau Kappa Epsilon fraternity chapter at Indiana University (Secretary).
- Special Olympics coach/chaperone (Golf, Football, Basketball, Bowling).
- St. Francis Medical Hospital volunteer (pharmacy operations).