

Desmond W. Clay

Versatile Technologist & Proven Leader

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At a Glance

- ✓ Full-Stack Development
- ✓ Generative & Agentic AI
- ✓ Workflow Automation
- ✓ Leadership & Team Management
- ✓ People Management (All Ages)
- ✓ Customer Relations & Cash Handling
- ✓ Mentoring & Training
- ✓ Adaptability & Rapid Learning

Core Competencies

Languages & Frameworks

Python, Flask, JavaScript, HTML/CSS, GDScript, SQLAlchemy

AI & Data

AI/LLM Integration, API Integration, Data Validation, Cryptography Concepts, Audio Signal Processing, RAG, NLP

Tools & Platforms

Git/GitHub, Docker, Godot Engine, Leap Motion SDK, Google Cloud Platform

Professional Skills

Leadership, Team Building, Operational Management, Process Improvement, Client Relations, Communication

Applied Interests

Creative Engineering

Exploring digital fabrication, prototyping, and composing with MIDI.

System Automation

A constant search for opportunities to build tools that streamline repetitive tasks.

Continuous Learning

A natural drive to deconstruct complex systems and acquire new skills.

Professional Experience

- 2025
○ **Assistant Manager | Byrne Dairy**
Manage daily store operations and lead a small team, providing guidance and training to foster a **collaborative and productive** work environment.
- 2021
○ **Activities Team Lead | Betsy Ross Nursing Home**
Led a team to design engaging social activities for residents, demonstrating **planning and interpersonal skills** with elderly populations.
- 2021
○ **Delivery Driver | Instacart & DoorDash**
Demonstrated exceptional **reliability and time management** in independent, customer-facing roles.
- 2020
○ **D-Net Lab | Freelance Development**
Provided freelance technology solutions, including custom software and hardware development, demonstrating a commitment to continuous learning and self-driven **project development**.
- 2020
○ **Summer Camp Coach | Rome's Best**
Provided a safe and positive environment for children, supervising and engaging with groups of up to 30, requiring **discretion and patience**.
- 2019
○ **Full-Stack Developer | Local Janitorial Company**
Held a dual role, applying technical skills to build and maintain websites while also performing **warehouse operations** and janitorial duties.
- 2017
○ **Sales Supervisor | Harbor Freight**
Built and led a dynamic sales team, managed daily operations, and excelled in **customer relations** by skillfully resolving disputes.
- 2015
○ **Associate | Thrifty Shopper**
Key holder position responsible for opening/closing, running register, and assisting customers.
- ...

Selected Projects

AutoAgent: Autonomous AI Platform

A web-based platform to deploy an autonomous AI agent for complex tasks like research and coding. Showcases skills in **Full-Stack Development** and AI model integration.

Python, Flask, Generative AI

PureNums: Quantum Number Generator

A command-line tool that generates verifiably random numbers sourced from the quantum vacuum. It uses an academic API and purifies the results using cryptographic hashing to ensure **high-quality randomness**.

Python, API Integration, Cryptography

LangAdventure: AI Language Learning RPG

An interactive, web-based roleplaying game for practicing Japanese language skills, featuring an AI Dungeon Master that generates a **dynamic, dual-language story**.

Python, Flask, AI/LLM

AirControl: Gesture-Based Computer Control

A Python application using a Leap Motion sensor for computer control with hand gestures. Demonstrates skills in **Hardware Interfacing**, SDK integration, and algorithm design.

Python, SDK/API, Hardware

Tactical AI: Real-Time Gaming Assistant

An AI that uses computer vision to recognize objects in a game environment and provide tactical advice. The model was trained on gameplay footage to distinguish between friend and foe, showcasing practical **machine learning** application.

Python, OpenCV, Computer Vision

Adv2DComponents: Godot 2D Components

A collection of reusable, data-driven components for the Godot Engine, designed to accelerate 2D game development by providing a modular framework. Highlights skills in **Game Architecture** and tool development.

GDScript, Godot, Game Dev