

Brandon Summerlin

OH • summerlinwork30@gmail.com •

Education

Bachelor of Arts

Kent State University • Kent, OH

Computer Science

08/25/22 – 12/13/25

Software Skills

- Python
- HTML
- JavaScript
- C++
- Machine Learning
- Natural Language Processing
- TensorFlow
- UI/UX Design

Project Work

Computer Vision Object Detection Model

Spring 2025

- Developed a custom object detection model using Python, OpenCV, and TensorFlow to identify and label objects in real-time from a webcam feed.
- Trained the model using a labeled dataset in tandem with the groups trained teachable model, utilizing transfer learning architecture to optimize speed and accuracy, achieving high performance on both common and custom objects.
- Deployed the system in a user-friendly interface for practical applications such as webcams, and using bounding boxes to highlight easy user responses.

Adaptive Chatbot Tutor

2025-Present

- Developed a custom AI chatbot that focuses on natural language processing, utilizing Python and libraries such as: TensorFlow, Gradio UI interface, and matplotlib.
- Implemented comprehensive data preprocessing pipelines for cleaning, tokenizing, and prepping data for the customizable machine learning models and storing tutoring sessions.
- Provides local persistent memory and session management for easy recall and continuation.

Juno Stack - Integrated Language Assistant

2025-Present

- Designed and implemented a programming language, featuring a personalized AI assistant leveraging Python, and natural language processing, to provide tailored responses and accelerated production.
- Designed the system to be customizable, showcasing different modes to enhance productivity, planning, and debugging to enhance user workflow.
- Features API endpoint setup, mode assignment, dynamic context switching, and provides a framework for managing multiple AI models with different roles.

Portfolio Website

2025-Present

- Designed and deployed a responsive, interactive personal portfolio site using HTML, CSS, and JavaScript to showcase technical projects and career goals, increasing recruiter engagement.

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Related Coursework

Artificial Intelligence 44201-001

Spring 2025

- Learned foundational concepts of AI, including machine learning algorithms, neural networks, and their applications in solving complex problems.
- Developed a deep learning model for personalized student learning, leveraging supervised and unsupervised techniques to create an adaptive chatbot that tailors explanations to individual knowledge levels and tracks progress.

Human Interface Computing 32301

Spring 2025

- Studied UI/UX design principles, focusing on the 8 golden rules of usability to create intuitive and user-centered software interfaces.
- Designed and prototyped an interactive web application, incorporating user feedback to enhance functionality and accessibility.

Software Engineering 33901

Spring 2025

- Explored software development lifecycle methodologies, including Scrum, to build collaborative and efficient coding projects.
- Led development of a computer vision object detection model, delivering weekly presentations to showcase iterative improvements based on peer feedback.

Structure of Programming Languages 33101-001

Spring 2025

- Analyzed the core principles and design of programming languages, focusing on major components such as the tokenizer, parser, evaluator, and runner to learn key features to build a language framework.
- Led development of an integrated language assistant, that crosses the bridge between chatbot interfaces, optimizing user workflow.

Computer Communication Networks 35201-001

Fall 2025

- Researched the design and operation of computer networks, including layered network architectures, data transmission, routing, congestion control, and network protocols such as TCP/UDP.
- Designed and tested real-world networking concepts through hands-on assignments involving packet flow, protocol behavior, and observed performance trade-offs in distributed systems.

Computer Graphics 47101-001

Fall 2025

- Explored fundamental computer graphics concepts including the graphics pipeline, transformations, rendering techniques, and rasterization using C++, OpenGL, and Assimp libraries.
- Implemented graphical applications demonstrating texture mapping, shading, animation, and efficient rendering techniques, to showcase interactive visual systems.

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Other Professional Experience

Sales & Vendor

2022-2023

Home City Ice • Walton Hills, OH

- Coordinated vendor deliveries and managed product stock to maintain cold chain logistics, contributing to a 15% increase in route efficiency.
- Provided prompt customer service while handling outdoor deliveries in variable weather conditions, improving satisfaction ratings.