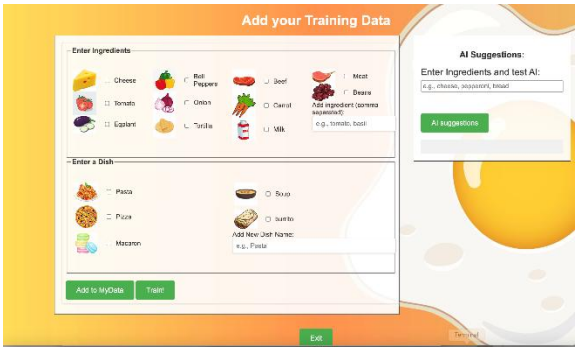
“DEVELOPING AI TOOLS FOR K–12”

These original software products were developed in Spring 2024 by students at UTSA and BASIS Shavano to teach central ideas in Artificial Intelligence, including text representation, machine learning, image recognition, algorithms, and recommender systems. I hope that you enjoy interacting with them!

Dr. Fred Martin, professor and chair, UTSA Computer Science

AI Chef Trainer *

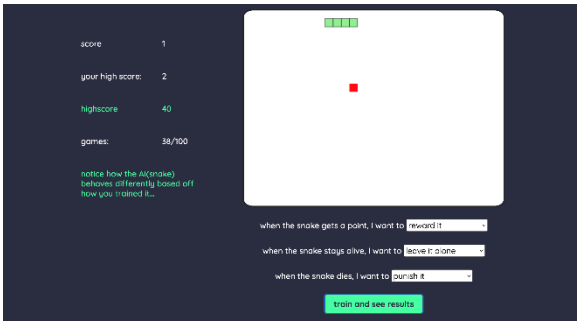
Saniya Vahedian Movahed



You pick the ingredients and see what AI suggests as dishes. Then you train the AI with your own recipes. This customizes the AI's suggestions to better match your culinary style and also enriches its database. Finally, you test the AI with a new set of ingredients to see what dish recommendations it can provide—creating a personalized culinary assistant.

Train Your AI

Cesar Hinojosa and Priyanka Kumar



"Train Your AI" allows the user to train their own AI to play the game snake. By allowing the user to choose different options on how to train the snake, they are exposed to how an AI agent learns by means of reinforcement learning.

SafariAI

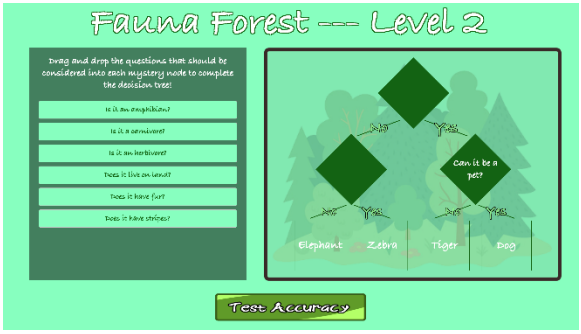
Matthew Muriel and Samin Alikhani

SafariAI uses Google's Teachable machine to teach students about machine learning image recognition. We hope students can learn about how AI models can only recognize images they were trained on.

* Project was developed by a research student of Dr. Martin outside of course structure and was demonstrated with the others at the AI Expo

Fauna Forest

Pragathi Durga Rajarajan and Adrian Cisneros



Explore Fauna Forest where you will discover what Decision Trees are! Fauna Forest is a game where you try to solve decision tree puzzles while learning what decision trees look like and how they are followed by the AI to reach different conclusions.

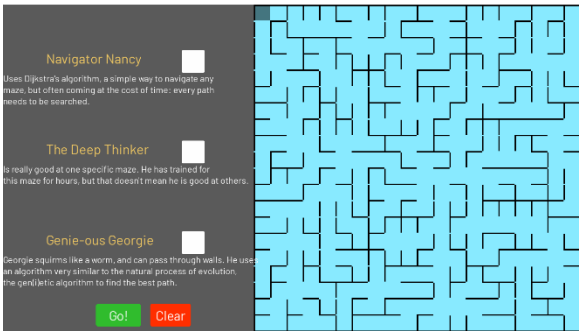
Word2Vec4Kids

Nathan Wiatrek and Yash Verma

Word2Vec4Kids teaches children about word embeddings to further their understanding of Artificial Intelligence. Users of the application will first learn basics about how computers interpret text and then interact with various game modes to facilitate a deeper understanding.

Genie Explorer

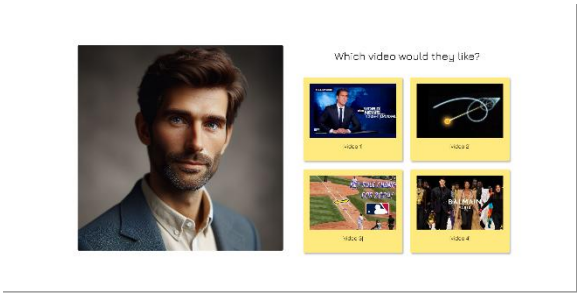
Isaac Nikolayev



The app introduces students to different AI models by letting them explore what different models do in different randomly-generated mazes. The participant can explore what the models do and see if they can spot any patterns in how they operate.

VidMatch

Ian Hankinson and Richard Powell



In this game, students play the role of an AI content recommender to decide which videos a made-up “character” would prefer based only on a portrait and a name. At the end, they compare their resulting category scores to those of the average and are prompted to consider what assumptions led to those results.