

Raagul Sundaralingam

raagul9803@gmail.com
(630) 677 5817

linkedin.com/in/raagul-sundar • github.com/RCode-9000

Naperville, IL
United States

EDUCATION

The Ohio State University

Bachelor of Science in Computer Science & Engineering

Specialization: Artificial Intelligence

Columbus, OH

May 2025

GPA: 3.7

Awards: Dean's List, 1st Place at ShowOHI/O 2023, 2nd Place at HackAI 2023, 4th Place at MakeOHI/O 2023

Relevant Coursework: Software/Web Development, Object-Oriented Programming, Data Structures, Algorithms, Machine Learning, Computer Architecture, Operating Systems, Database Management Systems, Computer Networking, Circuit Design, Calculus, Statistics, Linear Algebra

WORK EXPERIENCE

Machine Analysis of Political Speech Lab, Ohio State University

Research Assistant

Columbus, OH

January 2024 - Current

- Led the development of a scalable data pipeline for a research lab that aims to showcase how Computer Vision can facilitate a nuanced analysis of political speech alongside Natural Language Processing.
- Designed and implemented a SQL database to catalog politician profiles, discussed topics, and video segments.
- Automated data extraction in Python using OpenAI's WhisperX, HuggingFace's BGE-M3, and Meta's Llama-3.
- Created a prototype capable of digesting 1.5 hour debates into easy to use data into a SQL database in 13 minutes.
- Building a system that uses this database to perform multi-modal analysis on politician behaviors.

SmileChild

Software Developer

Columbus, OH

May 2023 - April 2024

- Developed an educational iOS application for a nonprofit startup aiming to fight infant mortality.
- Built interactive and educational games within the app using React Native to help users learn about child bearing.
- Debugged pre-existing games for better functionality and usability; added a review navigation feature to help users learn better if they got incorrect answers; prepared the app for a marketing study.
- Improved the app's overall user experience, enhancing its effectiveness and readiness for marketing.

EXTRACURRICULARS AND LEADERSHIP

Nelt - Newsletter Aggregator

Project Developer

April 2024

- Developing an app that declutters user email inboxes by moving their newsletter subscriptions into a central hub.
- Utilized Python Django to facilitate safe and centralized management of user data via an Amazon RDS database.
- Employed React.js to implement the framework for an intuitive and effective user experience.
- Implemented core functionality by using the Gmail API in Python to automate the retrieval of newsletters.
- Setting up a CI/CD pipeline on Google Cloud Platform for public release and updates.

Live Facial Emotion Recognition System

Project Developer

August 2023

- Designed and implemented a deep learning model using PyTorch to perform real time facial emotion detection.
- Utilized the FER2013 dataset to train the model, achieving accurate classification of 7 emotions.
- Implemented real-time face detection and emotion recognition on webcam streams using OpenCV and MTCNN.
- Developed workshops based on this project for the OSU AI Club to teach 70+ students how to make deep learning models.

HackAI 2nd Place Winner

Drone Automation Lead

February 2023

- Participated in Ohio's largest AI hackathon, HackAI, as a team of 3 against 40 teams and over 100 participants.
- Converted a DJI Tello into an automated AI surveillance drone for detecting threats to private property.
- Developed an autonomous mapping and flight algorithm utilizing the DJI Tello SDK, NumPy, and Matplotlib.
- Achieved 2nd place out of 40 teams by developing an MVP capable of mapped flight and object detection.

SKILLS

Programming Languages: Python, Java, C, SQL, JavaScript, HTML/CSS, x86-64 Assembler, C++, Ruby, MATLAB

Frameworks & Libraries: PyTorch, OpenCV, TensorFlow, React, React Native, Django, Ruby on Rails, Bootstrap, Matplotlib, NumPy, Pandas

Environment & Tools: Node.js, HuggingFace, Git, GitHub, Docker, Kubernetes, SLURM, Linux/UNIX OS, PostgreSQL, MySQL, Amazon AWS, GCP App Engine, SolidWorks, JUnit, GDB debugging, MS Office, Arduino Mega, and Arduino IDE