BENJAMIN HARRIS

LinkedIn: https://www.linkedin.com/in/benjamin-harris-388151274
GitHub: https://github.com/harrisb002 ← Check out my other projects!
Course Careers Profile

Summary

Passionate and self-driven computer science professional, software connoisseur, and chess fanatic with several years of software development experience in languages such as Python, C++, and Javascript. Seeking to apply my skills in a role that contributes to the company's technological and engineering success.

Experience

Sonoma State University, Instructional Student Assistant

Dec 2024 – Jan 2025
Report: BioSoundSCape NASA NCE Progress Report

- BioScape is an international initiative with thousands of scientists and engineers collaborating to understand the distribution, function, and importance of biodiversity in the Southern Region of Africa.
- Expanded and refined the Land Cover Classification Convolutional Neural Network to support the BioSoundSCape project under Professor Clark.
- Developed the highest achieving approach of the study with a 78% overall accuracy (Page 11, Remote Sensing – Land Cover)

Buddies, Office Fulfillment Associate

Dec 2021 – Sep 2022

- Generated all necessary documentation for the movement, purchase, and storage of company products, ensuring compliance with state regulations.
- Coordinated testing with 3rd party regulation laboratories, ensuring 100% compliance and timely product delivery.
- Achieved a 97% sell-through rate by managing inventory, coordinating testing, and updating online store listings.

Projects

Capstone project, Hyperspectral Image Classification

Report: Project Report
Video explanation: Project Overview
Code: https://github.com/harrisb002/Hyperspectral-Landcover-Classification

- Evaluated machine learning methods, such as Convolutional Neural Networks, Principal Component Analysis and Linear Discriminant Analysis, to classify hyperspectral (432 spectral bands) airborne imagery by ecosystem.
- Using the Google Maps API, cross-correlated the geo position of the collected samples with Google Earth satellite imagery to automate the process of collecting truth data for the purpose of training machine learning models.
- Performed extensive image preprocessing required to optimize machine learning performance, such as filtered image noise, resampling images to ensure a common ground mapped sample distance and used multispectral Mahalanobis distance to remove out of distribution features from the images.
- Developed a web application using the GoogleMaps API and DeckGL to quickly evaluate the performance of the machine learning models by 3D rendering classification accuracy plots overlaid on each sample's geo position.

Interpreter:

Code: https://github.com/harrisb002/Interpreter
Site: https://interpreter-5za8.onrender.com

- Invented a fully functional interpretive C-like programming language, incorporating language parsing, interpreter design, and execution flow.
- Developed a web-based interactive development environment to enable users to write, test, and execute code directly in the browser with real-time syntax highlighting and execution.

CONTACT

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CERTIFICATIONS

- Solutions Architect Certificate
- Cloud Practitioner Certificate
- Software Developer Certificate
- Backend Developer Certificate
- Blockchain Engineer Certificate

Education

Sonoma State University

BS in Computer Science, 2024

SKILLS

Programming Languages:	
Python	C++
Go	JavaScript

Data Science:	
SQL	Tableau
NumPy	Scikit-Learn
Excel	TensorFlow

Database Design:	
PostgreSQL	MySQL
MongoDB	DynamoDB
AWS	Prisma

Software Applications:	
Jenkins	Node.js
Docker	Express.js
Postman	Koa.js
Git/GitHub/GitLab	

Software Engineering Principles:	
Agile	Scrum
DevOps	REST APIs

REFERENCES:

Professor Matthew Clark, Sonoma State University

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Mariah Henderson, HR Manager of Buddies

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