David B. Sweasey

Raleigh, NC 27607 • (336)-406-8401 • davidbsweasey@gmail.com

https://www.linkedin.com/in/david-sweasey/ • https://davidsweasey.vercel.app

Overview

Passionate and determined computer science graduate with practical experience. Interested in research and implementation of machine learning models, neural networks, and general AI concepts. Pursuing graduate school to expand my knowledge, gain new experience, and hone in on my skills.

Education

North Carolina State University – B.S. Computer Science – Concentration in AI – GPA: 4.0 **Graduated: May 2025**

Minor: Mathematics

Relevant Coursework: Accelerated Deep Learning, Intro to Artificial Intelligence, Data Structures and Algorithms, Data Science, Automated Learning and Data Analysis, Numerical Analysis, Linear Algebra

Honors: Deans List (Fall 2021 – Spring 2025)

Skills

Technologies/Languages: Python, Java, Ruby, C/C++, Javascript, HTML, CSS, React, Node, SQL, Docker, PyTorch, CNNs, Pandas, Numpy, Matplotlib, MATLAB, Excel, Word, Git/GitHub, Windows, Linux on Ubuntu, BeautifulSoup, UiPath, Azure AI Foundry, Power Apps, Power Automate, Power Pages, REST, Websockets.

Soft Skills: Communication, Leadership, Organization, Planning, Collaboration, Problem Solving, Design, Attention to Detail

Projects

Online Poker App – Personal Project **July 2025 – Present**

- Developing a fullstack web application following MVC design principles. Node and Express backend, React and Vite frontend, PostgreSQL database. APIs allow communication between client and server
- Game state is managed by Websockets for live two-way communication between server and client
- Vercel to be used for frontend deployment; Render to be used for backend deployment

IT Procurement Tracker – NCSU Senior Design **Jan 2025 – May 2025**

- Collaborated to develop a full stack application using a “pizza delivery tracker” visual to facilitate the North Carolina Department of IT’s procurement process. Has an email-based authentication system.
- Backend implemented in ruby on Rails, frontend constructed with plain HTML, CSS, and Javascript
- Pulls data from an external database via API calls; incorporates a local MySQL database for temp storage

Skin Cancer Neural Network – CSC 422 – Automated Learning and Data Analysis **Oct 2024 – Dec 2024**

- Trained a convolutional neural netwrok on 10,000 images of skin lesions using Python, PyTorch, and Numpy
- Model could differentiate between benign and malignant with 90% accuracy on unseen testing data
- Employed confusion matrices and heat maps to gauge model efficacy

Pooling Layer Analysis of CNNs on MNIST Datasets – Accelerated Deep Learning Seminar Course **Mar 2024 – May 2024**

- Created a simple convolutional neural network in Pytorch for image classification
- Trained and tested on various MNIST dataset. Analyzed and documented effects of altering pooling layer parameters, count, and types on model accuracy.
- Drafted a scholarly research paper to report these findings

Experience

AI and Automation Analyst – North Carolina Department of IT (NCDIT) **June 2025 – Present**

- Leveraging UiPath and Power Automate to develop, test, and maintain automations for Statewide IT Procurement
- Received Microsoft certification as an Azure AI Engineer Associate. Employing Azure AI Foundry as backend and Copilot Studio + Power Pages as frontend for a procurement form completion assistant.
- Exploring ways to incorporate agentic and/or generative AI solutions in to the Statewide IT Procurement pipeline