

David B. Sweasey

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Overview

Passionate and determined senior computer science student with practical experience pursuing a Bachelor's degree. Interested in research and implementation of machine learning models, neural networks, and general AI concepts. Seeking positions to demonstrate technical knowledge and passion while learning new technologies and methods.

Education

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

Graduation: 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 – Fall 2024)

Skills

Technologies/Languages: Python, Java, Ruby, C, Javascript, HTML, CSS, Tailwind, SQL, Docker, PyTorch, CNNs, Pandas, Numpy, Matplotlib, MATLAB, Excel, Word, Git/GitHub, Windows, Linux on Ubuntu, NVIDIA CUDA, BeautifulSoup

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

Projects

IT Procurement Tracker – NCSU Senior Design

Jan 2025 – Present

- 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 network 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

CoffeeMaker – CSC 326 – Software Engineering

Sep 2023 – Dec 2023

- With a team, implemented a full stack application for managing coffee recipes, orders, payment, and staffing.
- Utilized a Java and Spring backend, a MySQL database with operations simplified by Hibernate, frontend built in AngularJS with HTML and CSS components, all communicating with RestAPIs.

Experience

Secretary – Alphi Phi Omegag Service Fraternity

Aug 2023 – Dec 2023

- Drafted and distributed weekly emails to organization members containing important events, action items, and dates
- Maintained meeting minutes at weekly minutes with color coordination
- Tabulated meeting attendance and maintained a living document for absences

Volunteer – Brentwood Boys and Girls Club

Aug 2022 – Dec 2024

- Tutored children in reading, math, and science. Read to children and helped with activities
- Ensured safety of children in outdoor activities and sports