Nikki Phach

Boston, MA | (401) 585-3212 | nikkiphach@gmail.com
nphach.github.io | nphach | in/nphach

As a first-generation American and the first in my family to attend college, I'm looking to jumpstart my career in software development. I pursued computer science because I enjoy math, problem solving, and seeing opportunities to apply myself creatively. Being an avid learner, I'm open to exploring a wide range of technologies and look forward to working together to create something remarkable.

Education

University of Massachusetts Boston May 2024
B.Sc in Computer Science

- Advanced Data Structures and Algorithms (Java)
- The Structure of Higher Level Languages (Racket)
- Database Management (Oracle SQL)

Supervised Machine Learning: Regression and Classification January 2024
Coursera (DeepLearning.AI, Stanford University)

Projects

Personal Portfolio Website June 2024

- Deployed a React application on Github Pages in JavaScript, showcasing personal biography and past projects.
- Designed responsive sections with Tailwind CSS and shadcn components, incorporating cursor trail and scroll animations using Framer Motion.
- Implemented a functional contact form with EmailJS for message forwarding and zod for schema validation.

Image Analysis: Skin Detection Spring 2024

- Collaborated within a team to develop a Python-based skin detection tool for dermatological applications, using the numpy, cv2 and matplotlib libraries.
- Enhanced existing algorithm by refactoring code for improved readability and ease of use, and supporting asyncronous image processing for decreased runtime.
- Constructed a ground truth data set and implemented a Metrics class to calculate algorithm performace.

Huffman Compression and Hamming Encoding, Decoding Spring 2024

- Crafted bit manipulation projects in C, focusing on string/ bit processing and memory management, using getopt and makefiles.
- Built Huffman coding for text compression and Hamming coding for error-corrected text file encoding/decoding.

AI Gesture Recognition for Naval Operations Fall 2023

- Developed a gesture recognition system in Python to classify naval airplane handling signals, hosted on Google Colab for team collaboration.
- Used pandas and numpy for data preprocessing and KMeans custering to generate insight of gesture data.
- Displayed various models' performance from scikit-learn with ROC-AUC scores and confusion matrices, achieving second place in class presentation.

Work Experience

Waitress and Line Cook 2015 - 2024
Newport Creamery, Mokban Korean Bistro, Balance Patch

- Communicated actively with customers and staff to ensure customer satisfaction and timely, attentive service.
- Managed workflow by prioritizing tasks by urgency and importance to enhance efficiency.
- Applied conflict resolution techniques to maintain a positive, professional atmosphere in high-stress situations.