Advik Duvvuri

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EDUCATION

University of Maryland - College Park, MD (**GPA:** 3.96 Dean's List) ***Expected: 05/2027***
Bachelor of Science: Major: Computer Science - Machine Learning Track + Math - Statistics Track
Minor: Robotics and Autonomous Systems
Relevant Coursework: Object Oriented Programming I and II, Introduction to Computer Systems, Discrete Structures, Organization of Programming Languages, Algorithm, Introduction to Robotics

EXPERIENCE

Undergraduate Research Assistant - University of Illinois Chicago (UIC) ***06/2024 - Present***
Supervisor: Dr. Tejabhiram Yadavalli (Department of Ophthalmology and Visual Sciences)

- Engaging in research to create machine learning algorithms to improve ocular drug delivery systems

Incoming Software Engineering Fellow - Headstarter AI ***07/2024 - Present***

PROJECTS

TerpMeals ***07/2024 - Present***

- Collaborated with a team of three to develop an iOS application using Swift for UMD students, providing personalized meal recommendations from campus dining facilities.
- Integrated Firebase Auth for secure user authentication and Firestore to manage user data efficiently.
- Implemented features to cater to dietary restrictions and goals, offering tailored meal suggestions.

Fitness Tracker and Workout Generator ***05/2024 - 07/2024***

- Developed a fitness tracker application using the MERN stack, featuring secure user authentication and the ability to create workouts manually and with the help of Machine Learning algorithms
- Built a robust backend with Node.js and Express, integrated with MongoDB for efficient data handling, and utilized JWT for secure authentication.
- Leveraged Python, Flask, Pandas, and Scikit-learn to implement cosine similarity algorithms to provide workout recommendations

Breast Cancer Classification ***06/2024 - 06/2024***

- Developed a Python machine learning model to classify breast cancer tumors as malignant or benign
- Utilized a random forest classifier to rank feature importance within the dataset and implemented a k-nearest neighbors model for predicting the state of the tumor
- Enhanced model accuracy from 93% to 98% by integrating feature selection and weighting

Bitcamp Hackathon Project - current.ly ***04/19/2024 - 04/21/2024***

- Collaborated with 3 others during the UMD Hackathon - BitCamp to create current.ly, a TikTok-like application that contains short form news articles that you can swipe through, using Angular.js for the frontend and integrating a news API for dynamic content.
- Implemented touch gesture recognition with Hammer.js for swipe and double-tap functionalities, enabling users to navigate news reels, like/unlike content, and even be redirected to news article websites via a right swipe gesture

TECHNICAL SKILLS

Programming Languages: Java, Python, C, Assembly, MATLAB, JavaScript, TypeScript, HTML, CSS
Frameworks & Libraries: React, React Native, Angular, Bootstrap, Node.js, Express.js, Flask
Databases: MongoDB, Firebase, Firestore
Machine Learning Libraries: scikit-learn, pandas, numpy, matplotlib

HOBBIES/CLUBS

Photography, Intramural Volleyball, Basketball, Mridangam, Piano, Biking