Madhav Malladi

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Education

Rutgers University-New Brunswick — New Brunswick, NJ

B.S. in Computer Science | Second major: Data Science(Statistics track) — *Expected Graduation, May 2027*

- CS Department GPA: 4.0
- Relevant Coursework: Data Structures, Computer Architecture, Discrete Structures 1, Introductory Linear Algebra, Statistics II, Principles of Computer Science
- Activities and Societies: Undergraduate Student Alliance of Computer Scientists, Data Science Club

Experience

Polygence — July 2023 – July 2024

Machine Learning Researcher | Python, Machine Learning, Jupyter Notebook — *Remote*

- Coded a machine-learning model, using the ReLU activation function, to predict whether or not a player made the All-NBA team in a given season
- Achieved >**90%** test accuracy using **Tensorflow** and **Sci-kit Learn**
- Data management and visualization with **Pandas/NumPy/Matplotlib**
- Completed a machine-learning and statistical analysis research project, researching relevant activation functions

FIRST Robotics Team #9125 — Sep. 2022 – Aug. 2024

Lead Software Engineer and Team Technician | Java, OOP, Computer Vision (OpenCV), Git — *Livermore, CA*

- Coded my team's robot using Java object-oriented programming, utilizing numerous libraries including REV Robotics and Limelight cameras.
- Managed the development of my team's code over a 3-month span, leading a team of 7 software engineers
- Developed swerve drive and integrated OpenCV-based vision, leading to a **10x increase** in Offensive Power Rating (OPR) through improved autonomous scoring and driver navigation
- Team Qualified for **2023 World Championships** → Winners of 'Rookie Highest Seed' award at Milstein Division

Projects

MyHotZones Shot Tracker | GitHub | *Spring Boot(Java), Next.js(React), PostgreSQL, AWS* Apr. 2025 – Present

- Building a full-stack basketball training platform that enables users to log shooting performance through an interactive UI, designed using Tailwind CSS
- Developing a custom Machine Learning model to identify shooting weaknesses
- Will integrate Open AI API to provide personalized drill recommendations
- Plan to deploy backend with AWS EC2 and frontend with Vercel

Full-Stack Stock Predictor | GitHub | *Flask (Python), React.js, Tensorflow* Feb. 2025 – Apr. 2025

- Created a web application that predicts future stock prices for a user-selected company
- Trained a prediction model using Tensorflow and retrieved data using the YFinance API
- Working on deployment of backend with AWS EC2 and frontend with Vercel

Music Wordle | GitHub | Game | *React, JavaScript, HTML/CSS* Nov. 2024 – Dec. 2024

- Developed a Wordle-style guessing game in which the user attempts to guess a randomized Spotify top-artist
- Implemented an interactive search functionality for users to guess an artist, enhancing the user experience
- Designed a responsive UI using React.js and HTML/CSS for seamless gameplay

All-NBA Team Prediction Model | GitHub | Article | *Python, Machine Learning, Jupyter Notebook* July 2024

- Coded a ReLU activation function to predict whether or not a player made the All-NBA team in a given season, utilizing an NBA API to gather data from every player in that season.
- Achieved >90% accuracy using Tensorflow and Sci-kit Learn

Technical Skills

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, RISC-V Assembly
Libraries/Frameworks: Pandas, Spring Boot, Flask, React, PostgreSQL, Next.js, NumPy, Matplotlib, Tensorflow, Scikit-learn, Tailwind CSS
Developer Tools: Git, Jupyter Notebook, Visual Studio Code, AWS