DIYA KINI

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EDUCATION

University of Michigan **Ann Arbor, MI**
B.S.E in Computer Science *Aug 2023 - Dec 2026*

- Academic Honors: Michigander Scholar, Dean's Honor List
- Relevant Coursework: Data Structures & Algorithms, Programming & Data Structures, Human-Robot Systems, Introduction to Artificial Intelligence, Computational Linear Algebra, Multivariable and Vector Calculus, Microprocessors and Toys

EXPERIENCE

University of Michigan Robotics Department **Ann Arbor, MI**
Research Assistant *Jan 2024 - Present*

- Led the development of a fully autonomous robotic system utilizing computer vision algorithms within the OpenCV framework and Python
- Specialized in improving the Jetson Nano's stereo vision implementation within the MBot ecosystem used in graduate courses through ORB SLAM

University of Michigan College of Engineering **Ann Arbor, MI**
Instructional Aide *Jan 2024 - Present*

- Executed matrix and vector operations and linear transformations to optimize LiDAR data interpretations in robotic navigation tasks
- Taught 200 students the application of ML concepts, including linear regression, to develop predictive models for robotic systems, enhancing pattern recognition and decision-making processes
- Explained feedback control algorithms for dynamical systems, such as balancing a Segway robot, leveraging linear algebra and Julia programming for improved system stability and performance

Berry Consultants **Austin, TX**
Data Science Intern *June 2022 - Aug 2022*

- Analyzed the optimal length of time a novel gene therapy would keep hemophilia patients at a safe level of clotting through the R programming language
- Worked with a team of 3 data scientists to investigate the relationship between biomarkers of the gut biome and clinical outcomes for an innovative treatment for C-difficile infections
- Assisted in the FDA approval of 2 treatments by developing plots of drug efficiency and safety alongside PhD Statisticians

PROJECTS

Foreign Exchange Rate Predictions (Python) *July 2024*

- Used time-series analysis and LSTMs to predict EUR/USD exchange rate from existing data in Yahoo Finance
- Incorporated news sentiments from current news articles to improve forecast accuracy through NLP techniques and Tensorflow by analyzing the emotional tone of words in the text

ML Robot Tour (Python) *Dec 2023*

- Integrated vision-based navigation system, enabling adaptive robot pathfinding upon numerical cue detection
- Optimized route selection of MBot Omni's obstacle avoidance by 20% through SLAM and BFS
- Trained 3 ML numerical recognition models (KNN, Linear Classifier, Neural Network) using SciKit Learn and the MNIST database

SKILLS

Licenses & Certifications:	TensorFlow Professional Developer Certificate (DeepLearning.AI), Finance & Quantitative Modeling for Analysts Specialization (University of Pennsylvania)
Programming Languages & Computer Skills:	Python, C++, R, Java, Solidworks, Julia, OpenCV, MATLAB, Verilog, Git
Tools & Machinery:	CNC, Mill, Lathe
Extra skills:	Spanish, Leadership, Public Speaking