Teja Koduru

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Education

University of Michigan Ann Arbor, MI
Freshman, B.S in Aerospace Engineering, Minor in Computer Science Expected December 2026

- 2023 U.S Presidential Scholar

Experience

Emerging Technologies Researcher August 2020 - Present
MITRE Corporation Mclean, VA

- Designed real-time path-planning algorithm for micro-UAVs in dense environments, configured MITRE's MASE Lab with Loco Positioning System for indoor flights of micro-UAVs, collected flight parameter data used in other MITRE UAV projects
- Designed 3 different AI models to identify disinformation campaigns on social media, tested 5 prototypes, and integrated software into MITRE's playbook for disinformation response
- Developed VR simulation of shoot-houses to help special operators train for missions, worked hand-in-hand with Navy SEALs representatives, presented to 50+ stakeholders including VP of MITRE, nominated for MITRE's SPARK award

Lyme Disease Researcher June 2020 – Aug 2022
National Institutes of Health Bethesda, MD

- Created world's first publicly available dataset of Erythema Migrans (EM) rash images, critical to diagnosing Lyme disease effectively
- Developed a Tensorflow Lite model to recognize EM rashes and by extension Lyme Disease, final product had above 90% accuracy compared to the roughly 40% accuracy of doctors in the field
- Led the testing of the model in local clinics, resulting in better accuracy and a better patient UI for the final product

Current Projects

Project Sirius December 2022 – Present

- Designing a minature hand-thrown FPV drone for short-range reconnaissance
- Flying wing design maximizes flight time while minimizing energy usage
- Early foam prototypes put to use by farmers to spot erosion or nutritional deficiency patterns in crops

Project Whirlwind February 2023 - Present

- Developing a cheap alternative to commercially available electric skateboards for short-range transport
- Utilizes 3D-printing techniques to reduce costs of critical components such as battery enclosures

Other Projects 2018 - Present

- Please refer to website

Skills

Languages: Python, C, Java, C++, MATLAB, JavaScript, HTML, CSS
Mechanical Design: Autodesk Fusion 360, CATIA, AutoCAD