

MADHAV SONI

ASPIRING ENGINEER

PROJECTS - 3U CUBESAT - SELF INITIATED

- Selected to represent the UAE in an International Space Tournament “Orbita”
- Co-Built 3U CubeSat: launched it to stratosphere:21000 meters: Conducted 15+ simulations: 10+parameters: 2+situations: Designed Exterior Payloads: Designed vacuum chamber and materials testing payload
- Role: Mechanical Engineer and Simulation Design Engineer

PROJECTS - MICHELSON INTERFEROMETER - SELF INITIATED

- Constructed a Table-Top Michelson Interferometer by myself: Used an optical bench, beam splitters, 3D designed and printed mounts, BH1750 lux sensor, Raspberry Pi, Jumper wires, and breadboard. Achieved Strain Amplitude Spectral Sensitivity between 10^{-5} and 10^{-7}
- Role: Self-Constructed, built from scratch.

CONFERENCES/PRESENTATIONS/MORE ACTIVITIES

- Presented 41-page technical report at the International Space Conference “Orbita” - Achieved 2nd place - 1 point away from 1st place - best simulation work ever done in a conference and first ever.
- Presented my AI/ML detection-done in a group- classification system in the Inspirit AI Scholars Conference - 30+ people/mentorship under Harvard student
- Harvard Undergraduate Ventures in Tech (HUVTSP) - <15% acceptance rate - Invited to startup pitching meetings with Mark Cuban, Chris Barton-founder of Shazam, Netflix founder, Nike.
- Interned at Stealth US aerospace Defense company - created AI/ML classification algorithm and system for military camo vehicles.
- CEO of GuideWise - App designed for the elderly with active learning, flashcards, streaks, levels, example scenarios. Presented MVP to an audience of 30+ people - mentored under Deloitte Consultant.
- Published Paper in the American Journal of Student Research (AJOSR) - Undergraduate peer-reviewed journal, mentorship under CMU PhD in Physics. Explored the setup of Michelson Interferometer and compared sensitivities with LIGO.
- Founder of GroundLeaders - Provided jobs to blue collar workers - 8+ workers and 7+ jobs acquired. 1 job was at an engineering company
- SpaceIT Founner - Created CubeSat kits for 100+ students - 15+ textbooks, manuals, flashcards, weekly and baseline tests.
- Research in Additive Aerospace manufacturing parts, involved in SETI research, founder of basketball club at school grew to 30+ members.
- Role: Simulation and Mechanical Key speaker

AWARDS & ACHIEVEMENTS

- \$3500 scholarship to the Knowledge Society
- designed AI system to detect at risk Microsoft heating data centers.