

Abishek Arumugam Navukkarasan

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Research & Development | Design | Hardware | Test Engineering

PROJECTS

- **Protection Up High** - Dept. of Defense; US Navy; NIWC Atlantic August 2022 - Present
Identified Innovative Radio DF Solutions to Help pilots of C-130 aircrafts identify ground-based threats
- **Health Monitoring for People in Isolation** - University of Florida May 2022 - August 2022
Designed a suite of products for monitoring the Physical and Mental health of people in Isolation
- **Semi Cryogenic Liquid Prop Engine test stand** - Agnikul Cosmos April 2019 - August 2019
Designed a thrust test stand to qualify a semi-cryogenic liquid prop engine to Regulations.
- **SCARA robotic Arm 3D Printer** - RapidFab 3D Engineering December 2017 - May 2018
Designed a novel approach to a robotic arm-type 3D Printer
- **Experimental Lunar Payload** - Team Algol/Team Indus August 2016 - December 2016
Designed a coke can-sized experimental payload to evaluate the presence of life on the lunar surface.

Work Experience

Agnikul Cosmos Launch Vehicle Pvt. Ltd.

Chennai, India

Development Test Engineer

January 2019 - August 2019

- Designed, and built test systems to qualify systems and subsystems of a small satellite launch vehicle to FAA Flight qualification.
- Oversaw the development of multiple projects from speciality groups and vendors of multiple disciplines to address a defined need, by managing, and collaborating to achieve product requirements.
- Performed system hazard analyses and safety compliance with appropriate regulations.
- Planned, defined, and demonstrated high-level international standards on test systems.
- Hands-on hardware building of test systems, including high-pressure plumbing and data acquisition systems.

Lema Labs Robotics Technologies Pvt. Ltd.

Chennai, India

R&D Intern

December 2017 - September 2018

- Developed & designed Robotic kits from concept and proof of principles to specifications & Implementation.
- Coordinated with internal or external engineering teams on new designs and capability improvement and validation.

RapidFab 3D Engineering Solutions Pvt. Ltd.

Chennai, India

Project Intern

January 2018 - April 2018

- Developed a SCARA Robotic-arm 3D Printer using Fusion 360 and Ansys.
- Worked from initial concept and design to production phase, machining, prototyping, testing, and release.

Rent&Make Virtual Makerspace

Chennai, India

R&D Hardware Intern

July 2016 - December 2016

- Researched, Designed, Developed and Optimized Open-source hardware.
- Responsible for managing and deployment of 4 major products to customers.

SKILLS

Design and Analysis: AutoDesk; AutoCad, Inventor, Fusion 360 | DS; CATIA, SolidWorks | Simscape, Ansys

Programming Languages: Python, Embedded C, Matlab

Hard skills: Machine shop experience, High-Pressure Plumbing, 3D Printing | Soft Skills: IoT, Machine Learning

AWARDS & CERTIFICATIONS

- Achievement award Scholarship - Herbert Wertheim College of Engineering
- Engineering Innovation Certificate - Engineering Innovation Institute, HWCOE, University of Florida
- Graduated Air wing National Cadet corps ranked Flight Cadet in 2017

EDUCATION

University of Florida

Gainesville, FL

Master of Science in Mechanical Engineering (3.38/4.0)

2021 - December 2022

- Team member - Structures and R&D; Gatorloop - Hyperloop team of UF
- Coursework - Innovation 4 Defense, Engineering Innovation, Divergent Thinking, Engineering Project management, Fundamentals of Production Engineering, Advanced Manufacturing, Geometry of Robots.

Anna University

Chennai, India

Bachelor of Engineering in Mechanical Engineering (6.55/10)

2014 - 2018

- Active contributor to the Makerspace & DIY community in the City of Chennai