Chandan Sinha

✉ chandansinha@vt.du   🌐 http://chandansinha.me   📞 +1 (540) 998 1527   📍 Blacksburg, VA

EDUCATION

VIRGINIA TECH
MS, MECHANICAL ENGINEERING
2021 - 2023 (exp.) | Blacksburg, VA
Robotics, Autonomous, and Dynamical
Systems (RADS) Thrust Area

IIT HYDERABAD
MECHANICAL ENGINEERING (HONS.)
2013 - 2017 | Telangana, India
CGPA: 7.98/10
Product Design & Mechatronics

LINKS

Github:// **MechanicalCoder**
GrabCAD:// **chandan.sinha-1**
LinkedIn:// **in/chandansinha1**
StackExchange: // **OrangeDurito**
Twitter:// **OrangeDurito**
WordPress:// **thevindicatedaxiom**
YouTube:// **ChandanSinha1**

COURSEWORK

Applied Linear Systems (ongoing)
Industrial Robotics (ongoing)
Kinematics & Dynamics of Machinery
Design of Machine Elements
Planar Multibody Dynamics
Instrumentation and Control
Modeling and Simulation
Digital Fabrication (Teaching Assistant)

ADDITIONAL/ONLINE

Creative Product Design
Introduction to Data Structures
Database Systems - Theory + Lab
Dynamics & Control - MITOCW
Modern Robotics - Coursera

SKILLS

PROGRAMMING
C • C++ • Python • Java
HTML5 • CSS3 • JavaScript • ReactJS
• Git • LaTeX • Arduino

MODELING/SIMULATION
SolidWorks • Blender • Fusion 360
• Blender • MATLAB • OpenRocket

MISCELLANEOUS
Database - PostgreSQL, phpMyAdmin
OS - Linux (Debian Platform), Windows
Creativity - Adobe Photoshop, Illustrator
Premiere Pro, After Effects

WORK EXPERIENCE

GRADUATE RESEARCHER | VIRGINIA TECH
Aug 2021 – Present | Blacksburg, VA | Advisor: Dr. Andrea L'Afflitto
- Working in the 'Advanced Control Systems Lab' on designing robust and adaptive control algorithms for autonomous flight of UAVs.

RESEARCH ASSISTANT | INDIAN INSTITUTE OF SCIENCE
May 2019 – Dec 2020 | Bangalore, India | Advisor: Dr. Swetaprovo Chaudhuri
- Joined 'Propulsion and Energy Conversion Lab' in the Dept. of Aerospace Engineering. Worked on computational analysis of blow-off dynamics in interacting swirl premixed flames for gas turbine application.
- Manually prepared a data-set of over 4000 sPIV-PLIF flame images and applied machine learning algorithms to predict flame blow-off.

CO-FOUNDER & PRODUCT ARCHITECT | TRIPLOU
Sep 2018 – Jun 2020 | Ranchi, India
- Triplou is an end-to-end experiential travel platform that addresses the problem of fragmented travel industry and promotes sustainable tourism.
- Led the web development and creatives division while making critical business decisions. Posted revenue growth of over 400% YoY (pre-Covid). Recognized by NASSCOM and the Ministry of Tourism, Govt. of India.

EXECUTIVE MANAGER, PLANT OPS. | BHARAT PETROLEUM CORP.
June 2017 - Aug 2018 | Balasore, India
- Worked on Terminal Automation System, safety engineering, equipment testing & preventive maintenance related to handling of Class A inflammable products.
- As Control Room Officer, I saved millions in operational cost through pro-active troubleshooting with over 98% NANO (No Automation No Output) rating.

TECH. ASSISTANT | CENTER FOR HEALTHCARE ENTREPRENEURSHIP
May 2016 – Apr 2017 | IIT Hyderabad | Mentor: Dr. Mohan Raghavan
- Helped in setting up the incubation space from scratch. Underwent training at IndioLabs, Bangalore to understand the nuances of building med-tech products.
- Learned 'Human Centered Design' approach following the Stanford-India BioDesign process. Part of 'NeMo Care Wellness' founding team.

PRODUCT DEVELOPMENT INTERN | DREAMSINFINITY
June 2015 – July 2015 | New Delhi, India | Mentor: Mr. Anubhav Bansal
- Designed & developed a commercial 3D printer that uses UV-DLP technique.
- Minimized prototyping cost by indigenous manufacturing and in-house resin preparation. Offered in 2 configurations: top-down & bottom-up.
- Wrote the entire Arduino code base for printing logic in conjunction with customized open-source 3D slicing software, Creation Workshop.

NOTABLE PROJECTS

- Honors Project | IIT Hyderabad | Aug'16 - May'17
  - Worked on mechanical modeling of 3-axis gimbal for smartphone cinematography. Figured out forward and inverse kinematics, dynamic characterization and control system design in MATLAB Simulink.
- IIT Hyderabad Student Satellite Project | Aug'14 – Apr'15
  - Core member of Attitude Determination & Control Subsystem. Worked on the feasibility study of magnetorquers, reaction wheels, and RCS thrusters for a 3U CubeSat. Did extensive literature study on payload selection.