

# CHANDAN SINHA

✉ chandansinha@vt.edu    🌐 chandansinha.me    ☎ +1 (540) 998 1527    📍 2000 Foxhunt Ln, Blacksburg, VA

## EDUCATION

### VIRGINIA TECH

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

### IIT HYDERABAD

**B.TECH, MECHANICAL ENGINEERING (HONORS)**  
2013 - 2017 | Telangana, India  
CGPA: 7.98/10

## LINKS

Github:// [MechanicalCoder](#)  
LinkedIn:// [in/chandansinha1](#)  
GrabCAD:// [chandansinha-1](#)  
Goodreads:// [orangedurito](#)  
StackExchange: // [OrangeDurito](#)  
WordPress:// [thevindicatexdaxiom](#)  
YouTube:// [ChandanSinha1](#)

## RELEVANT COURSEWORK

Applied Linear Systems (ongoing)  
Industrial Robotics (ongoing)  
Kinematics & Dynamics of Machinery  
Design of Machine Elements  
Instrumentation and Control  
Modeling and Simulation  
Creative Product Design  
Digital Fabrication (Teaching Assistant)  
Modern Robotics - Coursera

## TECHNICAL SKILLS

### PROGRAMMING

C • C++ • Python • Java  
HTML5 • CSS3 • Vanilla JavaScript  
• ReactJS • NodeJS • Git • ~~ETX~~ • Arduino

### MODELING/SIMULATION

SolidWorks • Blender • Fusion 360  
• MATLAB • Ansys • OpenRocket

### MISCELLANEOUS

**Database** - PostgreSQL, phpMyAdmin  
**OS** - Linux (Debian Platform), Windows  
**Creativity** - Adobe Photoshop, Illustrator, Premiere Pro, After Effects [CC Suite]

## EXTRA-CURRICULAR

- **Web Coordinator** - Elan & Nvision - Techno-management fest, IIT-H | TEDxIITH
- **Graphic Designer** - Dept. of Geosciences, Virginia Tech | Extra Mural Lectures, IIT-H | Elektronika, IIT-H
- **Video Editor** - Humour Me Pvt. Ltd.

## WORK EXPERIENCE

### GRADUATE RESEARCHER | VIRGINIA TECH

Aug 2021 – Present | Blacksburg, Virginia, USA | Advisor: Dr. Andrea L'Aflitto

- 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 'Turbulent Combustion Lab' in the Dept. of Aerospace Engineering. Worked on computational analysis of blow-off dynamics in interacting swirl premixed flames using PIVMat toolbox with ReadIMX package in MATLAB.
- Manually cleaned data-set of over 4000 sPIV-PLIF flame images and applied Machine Learning to predict flame blow-off. [Blog Post] [Research Paper]

### CO-FOUNDER & PRODUCT ARCHITECT | TRIPLOU

Sep 2018 – Jun 2021 | 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. Achieved the revenue growth of over 400% YoY (pre-Covid). Recognized by the Ministry of Tourism, Govt. of India. [Pitch Deck]

### EXECUTIVE MANAGER, PLANT OPS. | BHARAT PETROLEUM CORP. LTD.

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 costs through proactive 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 'Nemocare 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. [Blog Post]

## NOTABLE PROJECTS

- **B.Tech Honors Project**  
Worked on mechanical modeling of 3-axis gimbal for smartphone cinematography. Figured out forward and inverse kinematics along with dynamic characterization. Designed the control system in MATLAB Simulink.
- **IIT Hyderabad Student Satellite Project**  
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.
- **Meduzz** - A Personalized Healthcare System for Geriatrics
- **Thready** - A threat detection system on-board drones using Particle IoT platform
- **Herbicare** - A mechanically automated periodic garden watering system