

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
GPA: 3.92/4.0

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:// [thevindicatedaxiom](#)
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)

TECHNICAL SKILLS

Programming

C • C++ • Python • Java
HTML5 • CSS3 • Vanilla JavaScript
• ReactJS • NodeJS • Git • \LaTeX • Arduino

Modeling/Simulation

SolidWorks • MATLAB • Ansys
• Blender • ROS • CoppeliaSim (V-REP)
• Fusion 360 • 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 | SpaceDrones Lab, Virginia Tech

Aug 2021 - Present | Blacksburg, Virginia, USA | Advisor: Dr. Jonathan Black

- Developing autonomous robotic platforms for In-Space Assembly and Servicing. Primarily interested in the GNC aspect of the drones. Previously worked at the 'Advanced Control Systems Lab' on designing robust and adaptive control algorithms for autonomous 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 large datasets of sPIV-PLIF flame images and applied ML to predict flame blow-off. [Blog Post]

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 revenue growth of over 400% YoY (pre-Covid). Recognized by the Ministry of Tourism, Govt. of India. [Pitch Deck]

Executive Manager, Plant Operations | Bharat Petroleum Corp. Ltd.

June 2017 - Aug 2018 | Balasore, India

- Worked in 'Terminal Automation System', safety engineering, equipment testing & preventive maintenance related to the handling of Class A inflammable products.
- As the Control Room Officer, I saved millions (in Rs.) in operational costs through proactive troubleshooting with >98% NANO (No Automation No Output) rating.

Technical Assistant | Center for Healthcare Entrepreneurship

May 2016 - Apr 2017 | IIT Hyderabad | Mentor: Dr. Mohan Raghavan

- Responsible for 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 stereolithography-based 3D printer. Minimized prototyping cost by indigenous manufacturing and in-house resin preparation. Offered in 2 configurations: top-down and 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. Analyzed forward and inverse kinematics along with dynamic characterization. Simulated the control system model using MATLAB Simulink. [Presentation]
- **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. [Blog Post]
- **Meduzz** - A personalized cloud-based healthcare system for geriatrics, **Thready** - A threat detection system aboard drones using Particle IoT platform, **Herbicare** - A mechanically automated periodic garden watering system.