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:// **chandan.sinha-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 | Elektronica, IIT-H
• **Video Editor** - Humour Me Pvt. Ltd.

WORK EXPERIENCE

Graduate Researcher | Virginia Tech
Aug 2021 – Present | Blacksburg, Virginia, USA | Advisor: Dr. Andrea L'Afflitto
- Working in the 'Advanced Control Systems Lab' on designing robust and adaptive control algorithms for the autonomous flight of Unmanned Aerial Systems.

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 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.