

Chandan Sinha

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📍 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:// [chandansinha-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'Affitto

- 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. [Research Paper Link]

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 '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

- 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.