



Advait Chandorkar

Bachelor of Technology
in Mechanical Engineering

+91-9323462323
2021meb1264@iitrpr.ac.in
GitHub

EDUCATION

Degree	Institute/Board	CGPA/Percentage	Year
Bachelor of Technology	Indian Institute of Technology, Ropar	7.55 (Till 4th Sem)	2018-2022
Senior Secondary	Maharashtra State Board	89.67%	2021
Secondary	Indian Certificate of Secondary Education	97.20%	2019

EXPERIENCE

- Modular Robotic Arm** Ongoing
Dr. Ekta Singla
IIT Ropar
 - Design an educational robotic kit comprising modular components that can be interconnected to form a serial manipulator, with each module capable of being joined at various angles, allowing for non-zero twist configurations.
 - Developed inverse kinematics algorithms and transformation matrices to accommodate non-standard twist angles.
- Electrical Tomography** Ongoing
Dr Prabath Agniiothtri
IIT Ropar
 - The presence and location of a defect in a sample sheet of anisotropic material, characterized by a non-linear relation between voltage and current, is being determined through the application of electron resistance tomography by passing direct current and measuring the voltages at various points on the periphery.
 - The method is verified by conducting simulations on Matlab and Comsol Multiphysics.

PROJECTS

- Inverse Kinematics of Serial Manipulator Using Deep learning** Feb 2023 - Apr 2023
Dr Ekta Singla
Github
 - Gave a preference to a particular solution and generated data using Matlab code
 - Trained the deep neural network model using generated data while incorporating workspace boundary
- Soft Robotic Gripper for patients with Diabetic Nephropathy** Feb 2023 - Apr 2023
Dr Satwinder Jit Singh
Drive
 - Designed a wearable glove with sensors that record various stimuli for controlling the gripper
 - Developed a five-fingered soft gripper having pneumatically operated fingers. The moulds for the fingers were 3D printed and the modelling was done using SolidWorks
- E-baja** Jun 2022 - Oct 2022
Student Competition
 - Designed suspension system and conducted fatigue, torsion and dynamic crash analysis on the model
 - Simulations were performed on BLDC motors for the powertrain of an ATV, assessing multiple parameters and analyzing efficiency to identify the most suitable motor for optimal performance.
- Ornithopter** Ongoing
Personal Project
 - Project involves development of a mechanical flying device that mimics flapping wing motion of birds
 - Designed an efficient power transmission system, consisting of gears and crank to convert the rotational motion from BLDC motor into the complex flapping motion of the wings.

TECHNICAL SKILLS

- CAD and CAE Software:** Solidworks, Fusion 360, Autocad, Ansys, Comsol Multiphysics, Abaqus
- Programming Languages:** Python, Matlab, C/C++, Java
- Other Engineering Tools:** Matlab and Simulink, Microcontroller(Arduino and ESP32), Fritzing, TinkerCad, Roboanalyser, RoboDk, Octave, CoppeliaSim, Lotus Shark

KEY COURSES TAKEN

- Mechanical Core::** Solid Mechanics, Thermodynamics, Fluid Mechanics, Engineering Mechanics
- Mathematics::** Calculus, Linear Algebra, Differential Equations, Probability and Statistics
- Core Electives:** : Multi-Body Dynamics, Deep Learning for Physical Systems, Multibody Dynamics

POSITIONS OF RESPONSIBILITY

- Representative,** Aeromodelling Club, IIT Ropar Apr. 2022 - Apr. 2023
- Super Coordinator,** Aeromodelling Club, IIT Ropar Apr. 2023 - Apr. 2024

MISCELLANEOUS

- Tech Inter IIT** , Drona event where we programmed pluto drone to execute specific tasks 2022
- E-yantra,** Developed Pharma Bot 2021