

**ADITYA ROSHAN PATRO**Course : **B.E. (Hons.)**, Mechanical Engineering, 2022

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CGPA : 7.54

**ACADEMIC DETAILS**

COURSE	INSTITUTE/COLLEGE	BOARD/UNIVERSITY	SCORE	YEAR
B.E.(Hons.)	Birla Institute of Technology and Science,Pilani, Goa Campus	BITS PILANI	7.54 CGPA	2022
CLASS XII	DAV public school,Kota	CBSE	93.8 %	2018
CLASS X	Atomic Energy Central School #4 ,Rawatbhata	CBSE	10 CGPA	2016

Subjects / Electives	Fundamentals of Finance and Accounting, Supply Chain management, Business Communication, Derivatives and Risk Management, Intro to MEMS
Technical Proficiency	Confluence, API Development, C Programming, Django REST, HTML + CSS, C++ Language, Python, MATLAB, Excel, JIRA, SQL Programming, Agile Project Management, Bitbucket, React.js

SUMMER INTERNSHIP / WORK EXPERIENCE

Software Development Intern, Express Stores	Jul 2021 - Dec 2021
Full-stack SDE intern at Express Stores :	
<ul style="list-style-type: none"> ◦ Django Framework was used in developing web applications to implement the model view control architecture ◦ Exposure of implementing authentications using ORM Libraries ◦ Created database using PostgreSQL, wrote several queries to extract data from database ◦ Wrote Python Cron scripts for automation of cross-check processes ◦ Wrote lambda functions to send data to AWS server ◦ Worked on various business related logics for the stores and inventory management ◦ Used various tools like Postman API tester, Bitbucket , Vscode , Postgresql and AGILE methodology 	
Research intern, Dhio Research & Engineering Pvt Limited	May 2020 - Jun 2020
Worked as a research intern at DHIO Research & Engineering Pvt limited in Bangalore under Mechanical Department:	
<ul style="list-style-type: none"> ◦ The project focused on Static structural Modal and Harmonic Analysis of Pump Casing under Liquid Pressure ◦ Carried out the experiment on ANSYS Workbench under different Modal frequencies to find the Total Deformation and equivalent stress ◦ Benefit: We can find the safest frequencies under given pressure conditions for the pump casing to operate without experiencing failure 	

PROJECTS

Microentrepreneur Application - Express Stores - Full Stack Development - IT	Jul 2021 - Dec 2021
In this project I was mainly working on the addition of new features and functionalities for Express Stores Application, I have designed and developed backend API's using Django and REST Framework, used PostgreSQL Database in the backend and Postman for API testing, Used some features of AWS.	
<ul style="list-style-type: none"> ◦ Integrated Google Sheets API in the backend and created 4 APIs from scratch (URLs, views, managers, serializers) where the request data containing product and manufacturing details is being uploaded to google sheets. ◦ Used Recursion and Backtracking principles involving query manipulation to return a response containing the categories, brands, subcategories of all the products present in the database which is used for filtering of products. ◦ Worked on a Component/Screen using React-native and Redux-Saga for displaying a request modal that we get from API in the mobile application which helped in checking the status of their orders for microentrepreneurs. ◦ Created Dashboards on New Relic to monitor various custom events and to capture API performances happening throughout the codebase. ◦ Used lambda functions, SNS and secret managers from AWS for scheduling, queuing tasks and storing confidential information respectively. 	
Co-flow Jet on Airfoil - Boundary Layer Separation	Jul 2020 - May 2021
2D simulations of a Airfoil with a co-flow jet to control the turbulent layer separation phenomenon and delay it at high angle of attacks by >30°) conducting simulations on ANSYS Fluent. CFJ was able to increase the lift parameters significantly and increase stall angle by 5 degrees	

AWARDS AND RECOGNITIONS

STSE (State Talent Search Examination) Rajasthan State Government	Jan 2016
merit list with rank-16 in STSE scoring 81.67 %	
National Mathematics Olympiad Contest All India Schools Mathematics Teachers Association	Jan 2015
Gold medal in national mathematics Olympiad for scoring 90% marks	

COMPETITIONS

Boeing Aeromodelling Challenge
This was an inter-IIT Aerodynamics competition in which we had to build a remote controlled plane on our own ,adhering to the competitions requirements and then the planes had to compete with one-another for mobility , thrust power etc.