



AYUSH SAXENA | 19NA30006

OCEAN & NAVAL ARCH / OCEAN ENGG. NAVAL ARCH. (M.Tech Dual 5Y)

[LINKEDIN](#) | [GITHUB](#) | [WEBSITE](#)



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2024	M.TECH Dual Degree 5Y	IIT Kharagpur	7.85 / 10
2018	AISSE(CBSE)	VKS Public School, Moradabad	84.40%
2016	CISCE	Wilsonia College, Moradabad	68.5%

INTERNSHIPS

Software Developer Intern | TransOrg Analytics | Gurugram, India [Jun'22 - Jul'23]

- Engineered and maintained the back-end of the TransOrg Analytics and PicklAI, leveraging a robust tech stack for optimal performances
- Sustained the back-end of TransOrg Analytics and PicklAI on **Amazon Web Services** updated and deployed the **real-time modifications**
- Introduced monitor users, sessions, IP addresses and viewers per URL in admin panel, **reduce costs** on the external user tracking services
- Improved admin panel security with **middleware and RBAC** to limit access sensitive site information exclusively for authorized personnel
- Designed a secure panel to **optimise content control** and user functions while efficiently presenting data and **saving employees time**

Software Developer Intern | Web Prism IT Solution | Kolkata, India [May'21 - Jul'21]

- Contributed significantly to **React (front-end)** and **Python, Django (back-end)** for seamless full-stack projects within a collaborative team
- Designed the efficient and secure back-end systems with Django, **RESTful APIs**, authentication, and an optimized database system
- Participated in **code reviews**, actively contributing and embracing constructive a feedback to the cultivate of continuous improvement

PUBLICATIONS

Book: Mathematics for Competitive Programming and Data Structures: Mastering the Essentials | ISBN: 9798397120371

- Authored a comprehensive guide in C++, revealing essential mathematical techniques for **competitive programming and Data Structures**
- Simplifying intricate and diverse mathematical areas, encompassing Number Theory, Combinatorics, Graph Theory, Probability, Geometry
- Enlightened aspiring coders with **relatable examples**, empowering them for confident and effective competitive programming pursuits

PROJECTS

Learning Management System | Term Project | Guide: Prof. Kaushal Kumar Bhagat, ATDC, IIT Kharagpur [Jan'23 - Apr'23]

- Developed a robust **Python-backed** web-based Learning Management System (LMS) by utilizing the comprehensive web tech stack
- Implemented user roles (**admin, organization, teacher, student**) with separate dashboards for an efficient course management system
- Established the unique features for organizations, including teacher selection through **domain email IDs** and comprehensive user control
- Facilitated flexible teaching arrangements: can conduct courses independently with admin approval or assigned by the organizations
- Formulated **Analytics Dashboard** for the teachers: course **performance insights**, progress tracking, quiz integration in videos lectures

Ecommerce Website | Self Project [May'22]

- Developed a web-based e-commerce application from scratch using the tech stack **Python, Django Rest API, ReactJS, HTML, and CSS**
- Provided a simulated shopping cart system with PayPal and credit/debit card payments, product ratings, and a review system for users
- Added an administration area for managing customers, products, and orders of users, as well as integrating the product search features

Freelancers Marketplace | Self Project [Dec'20]

- Engineered freelancer marketplace with **Django, Python and RestAPI** enhanced user experience through **advanced search capabilities**
- Orchestrated dynamic user features, spotlighting profiles, skills, projects, and pioneering project-tag search for comprehensive exploration
- Innovated an **advanced comprehensive search engine**, enabling seamless exploration of freelancers' and projects' names, owners, tags

COMPETITION/CONFERENCE

Bronze | General Championship | Open Soft | Meghnad Saha Hall of Residence, IIT Kharagpur [2022 & 2023]

- Utilized the **JavaScript** and **Python RestAPI** to integrate the database in real-time and showcase technical prowess in containerization
- Engineered robust solution to **track transactions** for the comprehensive data analysis and designed fully functional e-commerce websites
- Led team to **3rd rank** in **2023**, built the dynamic financial transaction and e-commerce sites from scratch using comprehensive tech stack

POSITIONS OF RESPONSIBILITY

Events Head | NAROE, IIT Kharagpur [Jul'21 - Jul'22]

- Led a **3-tier** team of **30** members to organize annual departmental technical meet Samudramanthan with **200+** international participation
- Managed and planned events such as Convocation, Induction program, and Panel talks from the Alumni for the department's students
- Initiated and organized **10+ events** from **ideation to execution**, including team structures, for seamless execution of Samudramanthan

SKILLS AND EXPERTISE

Languages: Python | C++ | JavaScript | C | HTML | Solidity

Framework: Django(REST API) | NodeJs | Flask | FastAPI

Libraries: NumPy | Pandas | Matplotlib | SciPy | Seaborn

Utilities: Postman | Git | MS Office | Jupyter

COURSEWORK INFORMATION

Courses: Programming and Data Structures, Mathematics-I, Mathematics-II, Transform Calculus, Introduction to Financial Management

MOOCs: Algorithmic Toolbox (Coursera), Data Analysis with Python, Solidity Blockchain and Smart Contract FreeCodeCamp, SQL

Docker Containers and Kubernetes FreeCodeCamp, System Design, Microservice Architecture and System Design, ReactJS, Flask

EXTRA CURRICULAR ACTIVITIES

Community: Dedicatedly served as an executive committee member at Sarth from **2019 to 2023**, a NGO run by IIT Kharagpur students

Socult: Member of 2022 Inter-Hall General Championship's short film-making team at Meghnad Saha Hall of Residence, IIT Kharagpur

Sports: Basketball and Cricket team member at Meghnad Saha Hall of Residence for 2022 Inter-Hall General Championship, IIT Kharagpur