AYUSH SAXENA

LINKEDIN | GITHUB | WEBSITE

GMAIL | 91-9917691281

EDUCATION

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

INTERNSHIPS

Software Developer Intern | TransOrg Analytics | Gurugram, India   **[Jun'22 - Jul'23]**
- Engineered & maintained TransOrg Analytics and PicklAI back-ends with **Python** and a proprietary in-house library for peak performance
- 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

ShopMorph | Self Project   **[May'22]**
- Developed "ShopMorph," a web-based e-commerce application, from scratch using the tech stack **Python, Django Rest API & ReactJS**
- 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 | NAROES, 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 by University of California San Diego, Data Analysis with Python, Solidity Blockchain and Smart Contract
Docker Containers and Kubernetes FreeCodeCamp, System Design, Microservice Architecture and System Design, ReactJS, SQL

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