AYUSH SAXENA

Software Developer

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Education

Indian Institute of Technology Kharagpur	Jul'19 — May'24
Btech+Mtech (Dual Degree) - CGPA: 7.73/10	

Work Experience

Turing | Software Developer   Jun'24 — Present

Develop and debug code and repositories created by Google Code LLM and Meta Agentic Code LLM, implementing complex application features and specialized data modules for large language model training.

- Built and maintained a distributed training codebase for **Google's LLM projects using Flask/Django**, designing custom data loaders and evaluation scripts to validate code outputs generated by LLMs during training
- Engineered serverless data pipelines (Lambda, DynamoDB, **GCP VPS**) to preprocess and batch-process LLM-generated code, improving training throughput by **35% via parallelized task execution**
- **Debugged and stress-tested RESTful APIs** (Flask/Django on Kubernetes) **used to orchestrate LLM training jobs**, reducing API timeout errors by **50%** through CloudWatch-driven optimizations
- Deployed **CI/CD pipelines** (CodePipeline, CloudFormation) **for Meta's LLM training infrastructure**, enabling **zero-touch deployment of code evaluation tools** and slashing manual intervention by **70%**

TransOrg Analytics | Software Developer Intern   Jun'22 — Jul'23

- Engineered and maintained TransOrg Analytics & PicklAI systems with **Python** and proprietary in-house library for peak performance
- Sustained and updated companies' solutions on **AWS using EC2, Boto3, Route 53, and S3 buckets for real-time modifications**
- Introduced monitor users, sessions, IP addresses, and viewers per URL in the admin panel, **reduced costs** of external tracking services
- Enhanced admin panel security with **middleware & RBAC** to limit access to sensitive information exclusively to authorized personnel

Web Prism IT Solution | Software Developer Intern   May'21 — Jul'21

- Spearheaded **ReactJS, Python, Django, and Rest API** integration for seamless full-stack projects within a collaborative team
- Designed efficient and secure back-end systems with Django, **RESTful APIs**, authentication, and an optimized database architecture
- Engaged in **code reviews**, making substantive contributions, and embracing constructive feedback to cultivate continuous improvement

Projects

Driven Turbulence Analysis | MTech Project | Guide: Prof. Hari Warrior   Jul'23 — Dec'23

- **Developed an advanced neural network model** to predict the **pressure strain** in turbulent flows, focusing on 8 different variables
- Designed and meticulously trained a custom neural network specifically to predict Pressure Strain in complex flow scenarios accurately
- Achieved a Mean Squared Error MSE of 8.777e-07, RMSE of 0.00093, and an R^2 of 0.98, enhancing predictive accuracy by over **98.75%**

Learning Management System | IIT Kharagpur | Guide: Prof. Kaushal Kumar Bhagat   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 unique features for organizations, including teacher selection through **domain email IDs** and comprehensive user control
- Formulated **Analytics Dashboard** for the teachers: course **performance insights**, progress tracking, quiz integration in video lectures

Freelancers Marketplace | Self Project   Dec'21

- Established a freelancer marketplace with **Django (Rest),** and **Python**, enhancing user experience through advanced search capabilities
- Orchestrated dynamic features, spotlighted profiles, skills, projects, and pioneering project-tag search for comprehensive exploration
- Innovated an **advanced comprehensive search engine**, enabling seamless exploration of freelancers' & projects' names, owners, tags

Competition/Conference

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

- **Led team** to **3rd rank** in **2023**, built the dynamic financial and e-commerce product from scratch using the comprehensive tech stack
- Orchestrated real-time database integration using **AWS RDS and a private database**, showcasing technical prowess in containerization
- Devised a resilient solution for transaction tracking, leveraging **AWS DynamoDB**. Crafted a functional product with **dual databases**

Positions of Responsibility

Events Head | NAROES, IIT Kharagpur   Jul'21 - Jul'22

- Led a team of **30+** members to manage the annual departmental fest Samudramanthan with **200+** international participation
- Managed & planned events such as Convocation, Induction program, & Panel talks from the Alumni for the department's students
- Initiated & managed **10+ events** from **ideation to execution**, including team structures, for seamless execution of Samudramanthan

Skills and Expertise

- **Languages:** Python | C++ | JavaScript | Java | SQL   **Frameworks: Django (REST API) | AngularJS | Flask**
- **Libraries:** NumPy | Pandas | Matplotlib | Redux | ReactJS   **Technical skills:** API Integration | API design knowledge | AWS
- **Cloud & DevOps**: AWS (CodePipeline, CodeDeploy, CloudFormation, CloudWatch, X-Ray) | GCP Compute | Kubernetes | Docker | Jenkins | IaC

Extra Curricular

- **Community:** Served as an executive committee member at Sarth from **2019 to 2023**, an NGO run by IIT Kharagpur students
- **Sports:** Basketball & Cricket team member at Meghnad Saha Hall of Residence for the 2022 General Championship, IIT Kharagpur