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GitHub

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Academics

2021-present	B.Tech. in *Industrial & Systems Engineering* - **Indian Institute of Technology, Kharagpur**
CGPA	**8.46**

Experience

Apr '24 Present	**Software Engineering Intern:** AWSMO	**Remote**

- Implemented **CI/CD pipelines** using **GitHub Actions** for all services, featuring post-deployment health checks & **rollback on failure**, ensuring ≃40% less downtime & maintaining system integrity across the deployment lifecycle.
- Implemented business logic in **Django Rest Framework**, streamlined **ML training**, utilized **AWS Batch** for *55%* faster execution, and **AWS CloudFormation**, enhancing overall workflow automation and scalability by over *50%*.
- Developed a custom *stress testing framework* using **Golang**, **Python**, and **Terraform** to simulate various load patterns on servers, improving **testing efficiency by 50%** and identifying **20 critical bottlenecks** across all services.

Awards

- **InterIIT Tech Meet 12.0 | Contingent Gold**
    - Secured overall **first place consecutively for the third time** in the InterIIT Tech Meet 12.0 as a team held by IIT Madras
    - Participated in **3 events** as a developer in the team, working on **backend**, **cloud systems architecture** and **blockchain**
    - Developed a novel applications using **Metamask Snaps**; **patched bugs** in aptos library to send requests from browser

Projects

- **ApnaInsti | Golang, AWS, Docker, Nginx**
    - Developed **official mobile app for IIT Kharagpur** centralizing academic data, events & integrating exclusive features
    - Managed deployment on **AWS EC2** with **RDS** & **Docker**, utilizing **CodeDeploy** & **CodePipeline**, scaling for **10,000+** users
    - Built features: **travel share** & **buy/sell portal**; led a team developing **Django REST backend** & **React Native frontend**
    - Implemented **real-time Score Board** feature for GC using **Go** and **WebSockets**, deployed as micro-services in **Docker**

- **Naarad | Golang, Nginx, Digital Ocean, GitHub Actions, Docker**
    - Deployed a *customised* version of NTFY - **student run noticeboard service** for IIT KGP students - serving **5000+ students**
    - Managed deployment on **Digital Ocean** with **Docker**, utilizing **GitHub Actions** for **CI/CD**, scaling for over **15,000** users
    - Implemented Heimdall authentication, **OTP** verification via **institute email**, **JWT** & **NGINX** rules, allowing only KGPians
    - Integrated with MFTP serving **Internship and Placement notices** with separate topics for *Internship*, *Placement* & *PPO*

- **fERP | HTML, CSS, JavaScript, Web Browser Extension, BASH, Nginx, OCR**
    - Published a browser extension **automating feedback form filling** for IIT Kharagpur students, used by **1000+** students
    - Enhanced efficiency by **automating the transition** to the next course/professor upon form submission, saving time
    - Implemented a novel algorithm to solve the **CAPTCHA** with above **90%** accuracy written in **BASH**, served using **nginx**
    - Engineered **deployment pipelines** to **build** and **publish** on - **GitHub**, Mozilla Add-on Store and Chrome Web Store

Positions of Responsibility

- **Technology Coordinator |** Technology Students' Gymkhana, IIT Kharagpur
    - Oversaw **technological advancements** at IIT Kharagpur; assisted in resolving **over 200** student complaints every month
    - Maintained - ApnaInsti, Website, **Blogs** using Ghost, Noticeboard, common **dashboard** and mass **certificate generator**
    - Migrated from **AWS to on-premise** server; leveraged **Proxmox** for **3-layered system design** and **novel CI/CD pipelines**

- **Maintainer |** Metakgp, IIT Kharagpur
    - Developed and maintained various **critical open-source projects for IIT KGP students**, easing out stressful processes
    - Projects include: GYFT, kronos, Metakgp WIKI, GYFE, WIMP, IQPS, Heimdall, Metaploy, ERP login package, Metahub

- **Advisor, FOSS Club Lead |** Kharagpur Open Source Society, IIT Kharagpur
    - Organised **multiple student workshops**, advocating the adoption of open source and raising awareness among students
    - Organised KWoC-(22 and 23) (Kharagpur Winter Of Code) a month long event with **1.2k+ & 2.5k+** participants respectively

Technical Skills

Languages	Golang, Python, Bash, Typescript, JavaScript
Frameworks	Go-Fiber, Flask, Django, Node.js, Hyperledger Fabric, Metamask Snaps
DBMS	PostgreSQL, MongoDB, MySQL
OS Platforms	Linux 5/6 (Debian, Ubuntu, Fedora, NixOS), Unix (FreeBSD, OpenBSD, Solaris-8,9,10 & MacOS X)
DevOps	Computer Networking, Docker, Nginx, Linux System Administration, Cloudflare, Amazon Web Services (AWS), DigitalOcean (DO), Jenkins, ArgoCD, Terraform, Github Actions
Others	Git, GitHub, GitLab, Proxmox, Backend Development, Web Browser Extension Development