

Academics

2022 | *B.Tech + M.Tech (Dual Degree) in Computer Science and Engineering, IIT Kharagpur* with **8.7/10.0** GPA
With Micro-Specialization In Entrepreneurship And Innovation

Experience

May '23	Senior Backend Developer: Core Camp	Mercari, Bangalore
-	<ul style="list-style-type: none">- Led cost optimization efforts across GKE, GCP, and Datadog [Monitoring] to reduce the operating cost of owned microservices by $\approx 40\%$. As a side-effect, we removed large chunk of tech debt and made the services leaner.- Led Master V2 project to reduce cost in re-architecting APIs serving critical <i>Master Data</i> - involved multi-layered caching to provide low latency (faster app load), resiliency, and cost efficiency (\$5.3B Egress Cost to \$1.2B).- As part of the LTV Growth, worked on Onboarding Hub - gamification of the buyer/seller journey - involving <i>n+1 problem</i> that required client caching, concurrent calls, smart error handling, etc. to uplift 3.6% GMV.	
Sep '22	Game Backend Developer: Project BLACK	LILA Games, Bangalore
May '23	<ul style="list-style-type: none">- Planned, designed, and set up Backend for Project BLACK using Heroic Cloud's <i>Nakama</i> as Backend-As-A-Service in Golang with end-to-end CI/CD and documentation generation using GitHub Actions, Postman, and Heroic Cloud.- Used Protobuf (with gRPC) for model sync and master data transfer between Unity, Backend, and other tools, reducing de-serialization time at game load - from over 10s to ≈ 1s - while reducing GCP egress costs by $\approx 65\%$.- Implemented in-database caching to eliminate large number of DB calls, for lobby feature leading to an app freeze.	
May '21	Software Engineer: User-Master Team	Mercari, Tokyo
Jun '22	<ul style="list-style-type: none">- Designed process for migration of the monolith Mercari REST APIs (PHP) serving master data into gRPC micro-service (Golang) to optimize infra-cost, decouple independent data and increase maintainability.- Designed & developed i18n middle-ware for Mercari's microservices-kit, reduced engineering hours for client-config updates to 0 from 4hrs/week and refactored the microservices' code to improve extensibility.- In line with OpenSource culture, improved org-wide documentation for QA, release processes, and decommissioning micro-services; optimizing costs (2M Yen/Annum) and improving production-release speed and security.	
May '20	FullStack Intern: Skillbee IPI Connect	Skillbee, Noida
Jul '20	<ul style="list-style-type: none">- Identified and optimized memory-leak by analyzing NodeJS heap usage pattern to achieve five-nines availability.- Co-created architecture and implemented <i>fan-out on write</i> global and <i>fan-out on read</i> personal activity feed using <i>Stream Framework</i> and <i>Elasticsearch</i> respectively - reducing avg. feed generation time from 4 secs to 300 ms.	
May 19	Student Software Developer: Sample Platform	CCExtractor, Google Summer of Code 2019
Aug 19	<ul style="list-style-type: none">- Implemented code sanity checking mechanisms, increased unit-test coverage from 60.2% to 90.1%, implemented database migration methods and improved time estimation algorithm's accuracy with DB schema modification.	
May 19	Backend Engineering Intern: Income Tax Filing Tool	ClearTax, Bangalore
Jul 19	<ul style="list-style-type: none">- Updated ITR-2, ITR-3 and ITR-4 filing to 2018-19 fiscal-year schema while retaining backwards compatibility.- Improved DevOps using IIS Manager, Scalyr, Spinnaker and TensorFlow (with OpenCV and Keras) to setup up better logging, improved automation and Income Tax Department's captcha solver (achieving 94.3% accuracy).	
May 18	Student Software Developer: Project Nephos	CCExtractor, Google Summer Of Code 2018
Aug 18	<ul style="list-style-type: none">- Authored head-less tool to automate recording, processing and uploading IPTV streams for the University Of Navarra, Spain - increasing throughput by over 400+% with no human intervention required to handle failures.	

Projects

- **CareShare, Lead Developer**
Developed at *Zealth-AI (YC-W21)*, a platform (in TypeScript) for remote monitoring and diagnosis of Covid-19 & Cancer patients with i18n support. The product was pilot tested at 50+ hospitals, including *PGI Rohtak* and *AIIMS*.
- **CloudCron, Polyglot.Network**
Software as a Service (SaaS) platform (in Python) to ease the setting up and execution of cron-tasks; developed with stack comprising of GCP (AppEngine, CloudSQL, PubSub, CloudScheduler, Kubernetes Engine), Django and PostgreSQL.

Activities & Leadership

- **OpenSource Involvement:** Mentored *Make SwagLyrics Great Again* and *Sample Platform* in GSoC 2020 and GSoC 2021-2022, and high school students for GCI 2018 and GCI 2019 under *CCExtractor*, top mentor for *GirlScript Summer of Code (GSSoC) 2018* and *SoI 2019, IIT Dharwad*. I've successfully conducted *Kharagpur Winter of Code 2018*, *GSSoC 2019*, and *GSSoC 2020*.
- **InfoSec, Inter IIT Tech Meet:** 1st position (among 22 sister IITs) in Saptang Lab's Network Security Hackathon and 4th position in Payatu's Jeopardy Style CTF respectively in Inter IIT Tech 9.0 (IIT Guwahati) and Inter IIT Tech 8.0 (IIT Roorkee).
- **Head of Technology, IIT Technology Ambit:** Lead a team of 6 developers to provide sustainable and easy-to-maintain services for digital distribution of content with *open-source solutions*, estimated to serve 2000+ users on monthly basis.