

Aitik Gupta

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EDUCATION

Indian Institute of Information Technology, Gwalior
Integrated Bachelors and Masters in Information Technology

Madhya Pradesh, India
July 2018 – May 2023

EXPERIENCE

Software Engineer Intern

Headout | [Homepage](#) | *B2C* | *18M+ users*

Bengaluru, India; Remote

April 2023 – August 2023

- Implemented an automatic **follow-up creation** coroutine to handle **closed ticket** exceptions, 5% error rate reduction
- Re-architected the **booking state machine** based on 4 action **micro-states** for rescheduling & cancellation flows

Software Engineer Intern

BharatX | [Homepage](#) | *B2B* | *Credit-as-a-Service*

Bengaluru, India; Onsite

October 2022 – December 2022

- Architected 3 iterations of **live-transaction-grouping** with past groups on **fluid matching conditions**, to prevent fraud in realtime by **reverse indexing** on transaction-entities data, achieving **30x** latency reduction (1.5s to 0.05s)
- Designed the decoupled **entity injection** flow in **transaction-state-machine** worker tasks for 7 transaction routines

Software Engineer Intern

Mercari JP | [Homepage](#) | *Blog* | *C2C Marketplace* | *20M+ MAU*

Tokyo, Japan; Onsite

June 2022 – July 2022

- Migrated **seller-home** microservice to homogeneously serve **web** among other clients (Android/iOS), achieving **feature parity** hinted to 38% users, enabling **faster experimentation** formerly limited by client's fixed release cycles
- Decoupled the **focal RPC** fragment logic using **hexagonal pattern** in v2 API during 4 listing microservices **merger**

Backend Engineer Intern

FamPay Inc. | [Homepage](#) | *FinTech* | *10M+ users*

Bengaluru, India; Remote

September 2021 – January 2022

- Revamped **referral** engine with a **conditional data structure**, fixing bugs in production impacting ~130K rewards
- Implemented endpoints and 4 **HCC entities** to get user's monthly **transaction summary**, masked card, VPA, etc.
- Modularized **rewards** status engine to incorporate allocation & processing of **temporary claimed** reward conditions

Google Summer of Code

NumFOCUS, sub-org: *Matplotlib* | [Project](#) | [Report](#) | *950M+ installs*

Remote

June 2021 – August 2021

- Revisited library's core module to migrate from **font-first** to **text-first** approach with a **caching layer**, along with **multi-font** embedding; affecting 100% workflows (virtually the complete userbase)
- Devised a per-glyph **Font-Fallback** algorithm, letting text renderer find each by iteratively parsing further families
- Handled **Font-Subsetting** (valuable for CJK & commercial fonts), reducing output PDF/PS document sizes by 90%

TECHNICAL SKILLS

Languages: Python · Golang · JavaScript · C++

Developer Tools: Linux · Git · GitHub · pip · npm · VSCode · PyCharm · Goland · Anaconda · Jekyll

Frameworks | Libraries: Django · ent · Flask · GraphQL · PostgreSQL · MongoDB · ReactJS

Domain Knowledge: Backend Engineering · Font/Text Rendering · Machine Learning

PROJECTS

SocioMark | [FastAPI](#), [ReactJS](#), [MongoDB](#), [OpenCV](#)

April 2021

- Engineered the **steganography module** which embeds/decodes a unique user_id (SHA) inside an image in the form of 256-bit binary digits, additionally implementing the logic behind when to **encode/decode**
- Defined and developed the **backend endpoints**, their routes, model architectures and **database schema** in FastAPI
- Deployed the **server** (Heroku) and **client** (Netlify) with 3 linter checks for every pull request via **GitHub-Actions**

VSCode-GitHub-Projects | [TypeScript](#), [Apollo GraphQL](#), [Svelte](#)

March 2021

- Launched an **extension** that brings GitHub's Projects into Visual Studio Code with more than **25K downloads**
- Established persistent GraphQL communication by **polling** between 3 WebViews rendered by Svelte and GitHub

PUBLICATIONS

ActiveNet: A computer-vision based approach to determine lethargy

Aitik G., Aadit A.

ACM India Joint International Conference on Data Science and Management of Data

January 2021