Aitik Gupta

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EDUCATION

Indian Institute of Information Technology, Gwalior   Madhya Pradesh, India
Integrated Bachelors and Masters in Information Technology   *July 2018 – Expected May 2023*

EXPERIENCE

Software Engineer Intern   Bengaluru, India; Onsite
BharatX | Homepage | B2B | Credit-as-a-Service   *October 2022 – December 2022*
- Architectured 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 and calculating NPA% determined by DPD90
- Designed the decoupled **entity injection** flow in **transaction-state-machine** worker tasks for 7 transaction routines

Software Engineer Intern   Tokyo, Japan; Onsite
Mercari JP | Homepage | Blog | C2C Marketplace | 20M+ MAU   *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   Bengaluru, India; Remote
FamPay Inc. | Homepage | FinTech | 10M+ users   *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   Remote
NumFOCUS, sub-org: Matplotlib | Project | Report | 950M+ installs   *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%

Software Engineer Intern   Pune, India; Remote
RapidQuest Solutions | Homepage | Healthcare | 10K+ users   *July 2020 – December 2020*
- Improved and integrated native **cross-platform C++** codebase with **Android JNI** wrappers, processing with **TFLite**
- Built a utility to improve patients' journey by facilitating 100% online **physical rehabilitation**, animating 3D characters' **armatures** using body movements, removing redundancy in angle measurements by 80% withal

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 **20K 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*