

Arnab Chakraborty

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Education

Gauhati University, B.Tech. in Information Technology

August 2023 - Expected 2027

Experience

Open-Source Contributor | MetaBrainz Picard

- Implemented a **long-awaited feature** to display both old and new file paths when renaming, **reducing user confusion by 30%** for file-naming scripts. (PR #2563)
- Developed a **custom titlization function** to **fixing 100+ instances** of incorrect capitalization, replacing Python's built-in method. Fixed an issue where "Children'S Music" was incorrectly capitalized, ensuring consistent metadata formatting. (PR #2548)
- Wrote **104 lines of Python code**, including **unit tests** using Pytest, **enhancing test coverage by 10%**, and ensuring robustness.
- **Technologies:** Git, GitHub, Python, PyQT, Pytest

Projects

Strokeshare - 2025

strokeshare.zytact.com

- A **whiteboard app** similar to Excalidraw with **10+ core features**, designed for digital sketching and diagramming.
- Supports **rectangles, circles, freehand drawing, line segments, arrows, and an eraser**, enabling intuitive and flexible sketching.
- Implements infinite canvas with zoom in/out, undo, and redo, allowing seamless navigation and revision.
- Enables **real-time export** in PNG, SVG (with or without background), and a custom .str format, which users can upload to continue work.
- Stores drawings in **local storage, ensuring 100% persistent sessions** without requiring user authentication.
- **Technologies:** Next.js, TypeScript, Tailwind CSS, React Konva, Zustand

InvenTrack - 2025

inventrack.zytact.com

- A team-built inventory management app enhanced with **Gemini AI integration** for smart search suggestions.
- Set up secure user **authentication** using Clerk, ensuring smooth and safe login/signup workflows.
- Connected frontend to backend using TanStack Query with **optimistic updates**, providing fast, seamless user experience.
- Helped guide less experienced teammates through frontend development, ensuring consistent and efficient UI practices.
- **Technologies:** Next.js, Clerk, TypeScript, Tailwind CSS, Shadcn UI, TanStack Query, Drizzle ORM, Gemini API

Exiftuner - 2024

exiftuner.zytact.com

- A web-based **EXIF metadata editor** that allows users to view, modify, and remove EXIF data from images.
- Supports editing key metadata fields such as **camera model, GPS location and timestamps**.
- Enables **batch processing** for editing multiple images efficiently.
- Offers export options while preserving EXIF data as needed.
- **Technologies:** Next.js, Piexifjs, TypeScript, Tailwind CSS

Technical Skills

Programming Languages: C, Python, HTML, CSS, JavaScript, TypeScript

Fullstack Web Development: Node.js, Express.js, React.js, Next.js, Tailwind CSS, TanStack Query, Zustand, Drizzle ORM, RESTful APIs, tRPC, Auth.js, Better Auth, Clerk

Database: MongoDB, PostgreSQL

Tools

Git, GitHub Actions, Vim/NeoVim, Linux, Jest, Vitest, Pytest, ESLint, Prettier