Amit Bera

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Summary

Full Stack Developer specializing in video infrastructure and media processing, with hands-on experience building AI-powered video enhancement tools at Tensorpix. Currently developing tnsr.ai, a personal project focused on upscaling low-resolution video, images, and audio using advanced media processing techniques.

Technical Skills

Languages: Python, JavaScript, TypeScript
Framework / Libraries: FastAPI, Django (DRF), Flask, React, Next.js, Vue.js, TailwindCSS, Celery, Redis, RabbitMQ
Databases: MySQL, PostgreSQL, MongoDB
Cloud Services: AWS, Azure
Developer Tools: Git, Docker, Neovim, GitHub Actions, nektos/act
Testing Frameworks & Libraries: PyTest, Jest, Cypress, Selenium

Experience

Tensorpix   Dec 2024 – May 2025
Full Stack Developer (Contract)   *Remote - Croatia*

- Improved large video file uploads efficiency by 70% and reduced server load significantly by implementing presigned URLs and multipart uploads to enable direct media file uploads to **S3** (Cloudflare R2).
- Enhanced the upload process by integrating a WASM worker for client-side metadata extraction and thumbnail generation, eliminating the need for server-side indexing and contributing to substantial processing speed gains.
- Developed an advanced video preview feature with a draggable slider for before/after upscaled video comparison, improving user experience and increasing satisfaction ratings from 3.1 to 4.2.
- Developed a no-signup feature allowing users to upscale short video versions directly on our platform, which led to a 20% increase in user sign-ups compared to the previous month.
- Established a **CI/CD** pipeline using **GitHub Actions**, leading to faster release cycles and improved application reliability via automated testing and deployment.

Elucidata   Oct 2022 – Aug 2024
Data Analyst   *Remote*

- Developed the SanityCheck Python library to validate biomedical files, reducing data delivery time to customers by **40%** and enhancing operational efficiency.
- Designed and deployed **Docker** images for scientific research, improving experiment efficiency in collaboration with the Exelixis team.
- Led a sprint with the CurieBio team to deliver a **React** dashboard app, enhancing user experience and visibility.
- Automated data-processing workflows using a Python pipeline with **FastAPI**, **Celery** and **Redis** for NextGenJane, significantly enhancing productivity.
- Collaborated with Pfizer's team to improve their internal reporting web app using the **React** framework.

Projects

TNSR.AI

Web Application to Bring Your Memories Back to Life - Effortlessly upscale videos, audio, and images

- Engineered a full-stack web application for media enhancement employing deep learning models on a cloud GPU server.
- Designed a responsive frontend with Next.js and TailwindCSS, facilitating real-time updates through WebSocket.
- Constructed a FastAPI backend with Docker and Celery for asynchronous tasks, using PostgreSQL for data management and Alembic for schema migrations. Deployed on a bare-metal Ubuntu server.
- Implemented secure user authentication using JWT with Google SSO and integrated Stripe for seamless payments.
- Managed file storage with Cloudflare R2 and configured email notifications and job status updates via Discord webhooks.
- Established CI/CD pipelines with GitHub Actions and implemented extensive monitoring using OpenTelemetry and Grafana.

For more in-depth details about the project, you can visit my blog here.

Education

Jai Hind College   Mumbai, India
M.Sc. in Big Data Analytics   *Aug. 2020 – June 2022*

K.P.B Hinduja College   Mumbai, India
B.Sc. in Information Technology   *July. 2017 – June 2020*