Amit Bera

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TECHNICAL SKILLS

Languages: Python, JavaScript, TypeScript, Java

Frameworks / Libraries: FastAPI, Django (DRF), Flask, React, Next.js, Vue.js, TailwindCSS, Celery, Redis, RabbitMQ

Databases: PostgreSQL, MySQL, SQLite, MongoDB

Cloud Platforms & Services: Google Cloud Platform, AWS, Cloudflare R2

Authentication & Security: JWT, OAuth2, SAP Gigya OIDC, Firebase Auth, RBAC

DevOps / Tools: Docker, Git, GitHub Actions, Alembic, nektos/act

Testing Frameworks: Pytest, Jest, Cypress, Selenium, React Testing Library Monitoring & Observability: OpenTelemetry, Prometheus, Grafana, Loki

EXPERIENCE

Quantiphi Jun 2025 – Present

 $Senior\ Software\ Developer\ (Subcontract)$

Remote - India

- Architected a multi-region backend using FastAPI, PostgreSQL (Cloud SQL), and SCD Type-2 modeling to support cross-region data access and ensure global scalability and fault tolerance.
- Integrated authentication via **SAP Gigya OIDC** and **Firebase**, implementing CSRF protection, JWT key rotation, rate limiting, and a fine-grained **RBAC** system for enterprise-grade security.
- Developed secure file upload workflows with Firebase Storage and OIDC authentication, along with BigQuery-based audit logging and analytics pipelines for compliance tracking.
- Set up a robust CI/CD pipeline using GitHub Actions, Docker multi-stage builds, Trivy scans, and SonarQube checks, deploying to GCP Cloud Run with Cloud Armour.

Tensorpix Dec 2024 - May 2025

Full Stack Developer (Contract)

Remote - Croatia

- Improved large video file uploads efficiency by 70% by implementing presigned URLs and multipart uploads to S3 (Cloudflare R2).
- Enhanced uploads by integrating a **WASM** worker for client-side metadata extraction and thumbnail generation, eliminating server-side indexing.
- Developed a video preview feature with a draggable slider for before/after upscaled video comparison, improving satisfaction ratings from **3.1** to **4.2**.
- Launched a no-signup upscaling feature that increased new user sign-ups by 20% within a month.

Elucidata Oct 2022 – Aug 2024 SDE - I Remote

- Developed the SanityCheck Python library to validate biomedical files, reducing data delivery time by 40%.
- Automated data-processing workflows with FastAPI, Celery, and Redis, improving productivity for NextGenJane.
- Developed a RAG-based internal assistant on internal Confluence docs to locate resources, reducing inter-departmental dependencies and improving knowledge accessibility.
- Built and enhanced React applications, including a CurieBio dashboard and Pfizer's internal reporting system.

PROJECTS

TNSR.AI

Web Application to Enhance and Restore Media using AI

- Built a full-stack platform for video, audio, and image upscaling using FastAPI, Next.js (TypeScript), and PostgreSQL, deployed on a bare-metal Ubuntu server with Docker.
- Implemented distributed job processing with **Celery**, **Redis**, and **FFmpeg**, enabling scalable AI-powered media processing (super-resolution, denoising, face restoration, audio enhancement).
- Integrated JWT authentication with Google SSO, rate limiting, and secure file storage on Cloudflare R2.
- Added real-time job status updates with WebSockets and billing with Stripe for subscription management and multi-currency support.
- Established CI/CD pipelines with **GitHub Actions** and implemented observability with **OpenTelemetry**, **Prometheus/Grafana**, and **Loki** for metrics and log aggregation.

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

EDUCATION

Jai Hind College
M.Sc. in Big Data Analytics

K.P.B Hinduja College

Mumbai, India Aug. 2020 – June 2022 Mumbai, India

July. 2017 - June 2020

B.Sc. in Information Technology