Aditya Karun

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 LinkedIn GitHub Portfolio

Education

JSS Academy of Technical Education, Bangalore — Bengaluru
Bachelor of Engineering in Information Science and Engineering, CGPA: 8.25 — 2021 – 2025

Gyan Niketan, Vitthal Vihar, Danapur — Patna
CBSE (Class XII), Aggregate: 93.4% — 2021

Gyan Niketan, Vitthal Vihar, Danapur — Patna
CBSE (Class X), Aggregate: 93.4% — 2019

Experience

Pramana, an Evident Company — Bengaluru
Software Engineering Intern — April 2025 – November 2025

- Engineered a real-time message publishing system using RabbitMQ to relay key scanning events to inline image-processing algorithms running within Docker containers, ensuring 100% synchronized updates, modular scalability, and reliable inline image analysis.
- Implemented DICOMDIR functionality within the DICOM generation module, enabling compatible WSI viewers to access a hierarchical table of contents for each slide, allowing seamless navigation across patient, study, series, and image levels.
- Refactored and standardized the post-processing service in the pipeline, consolidating sanity checks and output validations across multiple modules; applied PEP 8 compliant linting, enhancing code maintainability and reducing debugging time by 40-50%.
- Integrated JPEG XL compression into the image pyramid generation workflow and benchmarked it against existing JPEG compression, achieving 25–30% smaller output sizes while preserving diagnostic visual quality, enhancing storage efficiency for large-scale WSI datasets.

Projects

EduConnect: An Interactive Portal for Teachers and Students (Link)
Tools: Flask, Flask-SQLAlchemy, SQLite, HTML, CSS, Jinja2, Werkzeug Security

- Developed a comprehensive web-based portal using Flask and Flask-SQLAlchemy, facilitating efficient scheduling and management of appointments between teachers and students.
- Designed and implemented database models with SQLite to store user information, appointments, and works, ensuring data integrity and consistency.
- Created a responsive and user-friendly interface with HTML, CSS, and Jinja2 templates, enhancing the overall user experience.

Block-Box: A Secure Decentralized File Storage System (Link)
Tools: Flask, IPFS, Python, HTML, CSS, JavaScript, Cryptography (Fernet/AES)

- Developed a secure, decentralized file storage system using Python, Flask, IPFS, and a custom blockchain, enabling encrypted file uploads and tamper-proof metadata recording.
- Implemented AES-based encryption and secret key management to ensure that only authorized users can access and decrypt their files, preserving data privacy and integrity.
- Built a responsive matrix-inspired web interface using HTML, CSS, and JavaScript, integrating seamless file upload/download flows with IPFS and blockchain verification.

Skills

Programming Languages: C, C++, Python
Web Technologies: HTML5, CSS3
Databases: MySQL, MongoDB, Neo4j
Tools & Platforms: Linux, Docker, CMake, RabbitMQ, VS Code, Jupyter Notebook, OpenCV, DICOM
Development & Collaboration: Git, GitHub, Bitbucket, Jira, Confluence, Notion, Slack
Design & Documentation: Canva, Draw.io, Lucidchart
Core Competencies: Problem Solving, Teamwork, Communication, Adaptability, Leadership