

Swapnil Tripathi

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Skills :

- **Languages:** C++, Java, Python, JavaScript, Go, SQL
- **Frameworks:** Android, Qt/QML
- **Web Development:** Node.js, Express.js, Django, FastAPI, Flask
- **Machine Learning:** PyTorch, TensorFlow, Scikit-Learn
- **Developer Tools:** Git, Linux, Docker, Postman, Kubernetes, Firebase, AWS

Education:

Kalinga Institute of Industrial Technology, Bhubaneswar

July 2019 - July 2023

Bachelor of Technology: Electronics and Computer Science Engineering

Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Operating Systems, Computer Networks, Database Management Systems, Cloud Computing, Data Analytics and Machine Learning

GPA: 8.5

Army Public School, Nehru Road, Lucknow

July 2018

Intermediate(10+2) - Physics, Chemistry, Mathematics and Computer Science

Grade: 79%

Work Experience:

Google Summer of Code - KDE Community

May 2021 - August 2021

- **Integrated** the KDE podcast player **Kasts** with linux ecosystem using the **MPRIS D-Bus interface**.
- **Extended** cross-platform support by integrating native android communication over JNI.
- **Integrated** GPodder and PodcastIndex API into the existing Qt application to support online podcast discovery.
- **Remodeled** the UI to reduce cognitive load and built a convergent application for mobile devices and desktops.

Projects:

Social Media Application API | FastAPI, PyTest, Alembic, Postman, Postgresql, Docker, CI/CD

- Developed a social media RESTful API capable of performing basic CRUD operations on posts and like and comment on posts.
- Implemented schema validation, credential hashing using bcrypt and added support for JWT user authentication.
- Deployment on Digital Ocean (currently offline) and as a containerized Docker application.
- Performed API tests using Postman and SwaggerUI and integrated unit tests using PyTest.

Optical Character Recognition API | pytesseract, FastAPI, Docker

- Developed an image to text (OCR) RESTful API using pytesseract toolkit to generate text strings.
- Deployed as an independent endpoint for potential use as a microservice having a wide variety of applications.

Customer Relationship Management application | HTML, Django, Postgresql, Tailwind CSS

- Developed a Customer Relationship Management system with Django as backend and Tailwind as front.
- Implemented database schema validation, user authentication and permission management systems.

Image Colorization web app | PyTorch, Deep Learning, Flask

- Developed a Generative Adversarial Network and a transfer learned U-Net in PyTorch to colorize images.
- Deployed the model on Heroku using Flask to enable user uploads and generate images in under 3s.

Video Membership Web Application | FastAPI, NoSQL, HTMX

- Developed application to let users watch videos in an embedded player and resume playback across sessions.
- Implemented user authentication from scratch, integrated CRUD support for playlists and user analytics.
- Incorporated a Cassandra managed database service and added search indexing using Algolia Search API.