Gabriel Prince D

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Experience

Alcatel-Lucent Enterprise (ALE)

Nov 2024 - Present

Software Developer Intern -C++, Networking Systems

Chennai,India

- Contributed to the development and maintenance of the **8770 Communication Management Platform**, a large-scale enterprise communication system.
- Enhanced call routing and logging modules in C++, improving response times by optimizing existing legacy code.
- Wrote unit and integration tests to ensure robust functionality and mitigate regressions during software updates.

Lead Integrated Business Services (LIBS)

Sept 2022 - Nov 2022

App Developer Intern — Flutter, Firebase

Chennai, India

- Designed and developed a prototype of an invoice billing system, handling both frontend and backend.
- Built the mobile app prototype using **Flutter** for UI and **Firebase** for backend services including authentication and Firestore database.
- Implemented key features such as invoice creation, customer management, and real-time billing updates.

Projects

Personalized Video Summary & Lecture Notes Generation (Research Project) | Python, OpenCV, Whisper AI, BART, BLIP

- Designed and implemented a research-driven NLP and video processing pipeline, reducing manual lecture note creation time by **80%** and enhancing content retention.
- Built personalized video summaries by extracting top **15–25**% of key segments using timestamped similarity matching, improving review efficiency for learners.
- Generated hierarchical notes with **90%+ sentence-caption alignment** by integrating audio transcripts, visual formulas, and slide entities.

PDF Chatbot Application | Python, FastAPI, C++, SentenceTransformer, ChromaDB

GitHub

- Developed a cross-platform desktop app enabling **real-time semantic chat with lengthy PDFs**, improving document comprehension and accessibility.
- Integrated FastAPI backend with SentenceTransformer and ChromaDB, achieving an average query response time of $< 1.2 \, \mathrm{s}$.
- Enabled PDF text extraction with OCR support for scanned documents, ensuring better document parsing and analysis.
- Configured CI/CD pipeline using GitHub Actions for automated builds and deployment across Windows, macOS, and Linux.

Technical Skills

Programming Languages: Python, C++, SQL, Java, Dart

Frameworks / Libraries: OpenCV, NumPy, Pandas, Matplotlib, PyTorch, Hugging Face Transformers, Flutter, Firebase

Web Technologies: HTML, CSS, JavaScript

Databases: SQL

Tools / Platforms: Git, GitHub

Core Areas: Machine Learning, Deep Learning, Data Structures & Algorithms

Education

Sri Sivasubramaniya Nadar College of Engineering

M.E: Computer Science and Engineering (CSE)

University College of Engineering Nagercoil

B.Tech: Information Technology (IT)

August 2023 - May 2025

CGPA: 8.53

August 2017 - May 2021

CGPA: 7.42