



Abhijit Dalal

Roll No.: 241060901

B.Tech Electronics Engineering

Veermata Jijabai Technological Institute, Mumbai

+91-9028064698

✉ abhijitdalal2609@gmail.com

✉ agdalalb23@el.vjti.ac.in

🐙 GitHub

🌐 LinkedIn

🌐 Portfolio

EDUCATION

•Veermata Jijabai Technological Institute (VJTI)

B.Tech in Electronics Engineering

2027

CGPA: 6.72

•Government Polytechnic Nashik

Diploma in Electronics & Tele-communication Engineering

2024

Percentage: 90.88

PERSONAL PROJECTS

•Skrolla | AI-Native Book Discovery App 🌐 Web

Jun 2026 – Jul 2026

TikTok-style scrolling discovery for books: recommendations driven by embeddings and math, generative AI used only for the chat experience.

- Tools & technologies used: Kotlin, Jetpack Compose (MVVM), Python, SigLIP2, Sentence-Transformers, Supabase (pgvector), Cloudflare R2, Gemini via Firebase AI Logic
- Embedded ~75K books as 768-dim vectors (SigLIP2 on cover art + bge-base-en-v1.5 on text, weighted concat, PCA-reduced from 1536-dim to fit storage constraints); recommendations served by nearest-neighbor search over a per-user taste vector updated in real time from scroll, dwell, and save signals.
- Shipped the native Android app end-to-end, wired to a live Supabase + pgvector backend, and “StoryMode,” an LLM chat layer (Gemini via Firebase AI Logic) that lets users ask questions about a book before committing to it.

•Play Store App Analysis | Market Research Pipeline over 3.45M Apps 🐙 GitHub

Apr 2026 – May 2026

Direct-connection scraping and DuckDB-backed analysis pipeline identifying high-opportunity, low-competition app niches.

- Tools & technologies used: Python, DuckDB, PostgreSQL, pandas, Plotly, Matplotlib
- Built a queue-based scraper collecting a fresh 11K-app dataset across 10 country storefronts, and queried a 3.45M-row 2022 archive entirely through DuckDB (never materialized in pandas) to compare market structure, monetization, and regional demand across a 4-year gap.
- Authored an 8-module script-based analysis pipeline (parquet-cached aggregates, static and interactive charts) that renders a single HTML report synthesizing opportunity signals into concrete app-build recommendations.

•Autonomous Racing using Deep RL | PPO Agents in 2D & 3D 🐙 GitHub

Jan 2026 – Mar 2026

Reinforcement learning agents that learn to drive from scratch, first in a 2D simulator, then scaled into a full 3D game engine.

- Tools & technologies used: Python, PyTorch, Stable-Baselines3, Gymnasium, Unity ML-Agents, C#
- Trained a PPO agent (CNN policy, 4-frame stack) on Gymnasium CarRacing-v3 to consistently complete full laps from raw pixel input; scaled the pipeline into a 3D Unity ML-Agents environment with custom C# scripts for agent observations, reward shaping, and race-flow control.

•Harry Potter GPT | Full LLM Fine-Tuning Pipeline on nanoGPT 🐙 GitHub

Oct 2025 – Dec 2025

A base GPT-2 taken through the complete modern LLM training recipe: pretrain, fine-tune, then align with human preference.

- Tools & technologies used: Python, PyTorch, HuggingFace Transformers, TRL, nanoGPT
- Engineered the 3-stage pipeline on GPT-2 (124M params): continued pretraining on ~2M tokens → supervised fine-tuning on 4,321 examples (val loss 2.33) → DPO (RLHF) alignment on 347 curated preference pairs; converted nanoGPT checkpoints to HuggingFace format, resolving Linear/Conv1D weight transposition for TRL compatibility.

EXPERIENCE

•Rishabh Instruments Limited

Jan 2024 – Apr 2024

Internship Trainee, Digital Production Department

Nashik

- Assisted in the assembly, testing, and calibration of digital metering instruments, ensuring compliance with quality standards.
- Diagnosed faults and troubleshooted electronic circuits on the production line, documenting processes throughout.

ACHIEVEMENTS

•Kaggle Bronze Medal, Google Play Store App Dataset 2026, 11K apps collected across 10 countries

2026

•Runner-up, Laghu Udyog Bharti (LUB), Hand Gesture Recognition System, real-time ASL recognition (OpenCV, MediaPipe, Raspberry Pi), diploma capstone

2024

POSITIONS OF RESPONSIBILITY

•Class Representative (CR), EXTC Engineering Diploma Class, Government Polytechnic Nashik

2021 – 2024