

# Alston Daniel Mendonca

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## EDUCATION

### St. Joseph Engineering College

Bachelor of Engineering in Artificial Intelligence and Machine Learning - CGPA 9.51

Mangaluru, India

Apr 2022 – May 2026

### GEMS Education

High School CBSE - 94.4%

Dubai, UAE

Apr 2013 – Mar 2022

## EXPERIENCE

### Junior Quant Developer Intern - Trading Systems and Automations

Jun 2026 – Aug 2026

RPG Trading DMCC

Dubai, UAE

- Designed and developed an event-driven backtesting engine for Indian derivatives markets, supporting 1-minute OHLC data, options chains, strategy simulation, and performance analytics.
- Built data pipelines to ingest, clean, and maintain historical tick-level and 1-minute market datasets using Python, Pandas, and Parquet-based storage.
- Implemented configurable trading strategy frameworks with portfolio tracking, transaction cost modelling, optimization, and walk-forward analysis capabilities.
- Developed backend APIs and dashboards for running, visualizing, and evaluating trading strategy performance.

### Machine Learning Engineer Intern

Nov 2025 – May 2026

Aquera

Bengaluru, India

- Developed and fine-tuned a BERT-based transformer model for automated service account classification within IAM systems, achieving near-99% accuracy and deploying to production via AWS SageMaker.
- Optimized ML pipelines for attribute mapping analysis, reducing end-to-end processing time by 10% and improving classification accuracy by 30%.
- Built and evaluated multiple ML models including LightGBM, CatBoost, RuleFit, and Elkan-Noto PU Learning Classifier for identity resolution.
- Integrated LLM capabilities into data processing workflows on AWS Cloud for intelligent document parsing and automated query resolution.

### Co-Founder and CTO

Apr 2026 – Present

ViperCore

Mangaluru, India

- Co-founded an offline-first POS platform adopted by cafes in Mangaluru and Dubai, handling real-time billing, inventory management, GST-compliant invoicing, and analytics dashboards.
- Architected and migrated the full-stack desktop application to Next.js with Electron.js backend, using AES-256 encrypted local SQLite for 100% offline reliability.
- Led end-to-end product development from concept to production, managing on-site installations and support for restaurant clients.

### Software Developer and AI Intern

Oct 2024 – Oct 2025

Heritage Safety Training Centre

Dubai, UAE

- Built and launched the company website with React and Vite; configured Moodle-based LMS workflows for course management and learner tracking.
- Developed an OpenAI-powered chatbot for automated learner support and training-related query resolution.

## PROJECTS

### RConnect | Python, FastAPI, Electron.js, DuckDB, SQLite

Oct 2025 – Present

- Developed a *QuantConnect/LEAN*-style event-driven options backtesting engine for Indian index derivatives (*NIFTY*, *BANKNIFTY*, *SENSEX*) with paper trading and live market data support
- Built a 48k LOC quant research platform featuring portfolio margining, Greeks, parameter optimisation, walk-forward analysis, and an Electron-based trading terminal
- Improved quantitative correctness through **186+** audited engine fixes and a **796-test** validation suite covering pricing, execution, and portfolio behaviour

- Calibrated realistic execution and fill models using **196.9M** LSEG market quotes stored across a **94M-row** *DuckDB* database

**DueLLM** | *Next.js, AWS Bedrock, Boto3, Node.js*

Jan 2026 – Feb 2026

- Developed a self-refining LLM system for iteratively critiquing and improving LLM generated ideas and solutions between two LLMs
- Built a full-stack system using *Next.JS* and *FastAPI* with multi-model orchestration via *Amazon Bedrock*
- Utilised *Claude Opus 4.6* effectively to accelerate development and bug fixing

**DressGuard AI** | *Python, FastAPI, YOLOv8, React.js, Vite, CUDA, Redis*

Jan 2025 – Sep 2025

- Lead a team of 4 to build a real-time AI-powered clothing detection and compliance system supporting webcam, video files, image uploads, and IP camera inputs.
- Fine-tuned *YOLOv8* models on custom-made datasets for different use cases
- Developed a configurable rule engine with automatic model discovery, bounding box visualisation and confidence score overlays.
- Implemented real-time facial detection and recognition via *FaceNET* and *Redis*

**ProperLCP** | *Electron.js, React.js, Node.js, SQLite, Git*

Sep 2024 – May 2025

- Led a team of 2 to design, develop and deploy a fully fledged restaurant Point-of-Sale (POS) system from scratch
- Delivered 75+ core POS features including real-time billing, inventory tracking, and reporting dashboards comparable to industry platforms like *PetPooja* and *Dineout*
- Currently in production use at *The Lassi Corner*, SJEC, Mangaluru

**SHANTHI** | *React Native, Expo, TypeScript, Supabase*

Aug 2024 – Sep 2025

- Developed a cross-platform mobile application supporting a year-long PhD Research study on mental wellness among nurses and healthcare professionals
- Implemented features including structured surveys, emotional check-ins, journaling and guided mindfulness audio sessions
- Designed a scalable backend using Supabase to manage user data, app usage tracking and other study inputs

## TECHNICAL SKILLS

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**Languages:** Python, TypeScript, JavaScript, Java, SQL, C/C++, R

**FrameWorks & Libraries:** React.js, Next.js, React Native, FastAPI, Express.js, Electron.js

**Tools & Platforms:** AWS, Docker, Git, Supabase, Redis, Expo, Cloudflare

**AI/ML:** PyTorch, TensorFlow, Scikit-learn, Pandas, YOLO, Hugging Face