Dravid K

Full-Stack Developer — Python • Django • FastAPI • Node.js • GenAI Engineering

+91-6374877701 | dravidsuju@gmail.com | linkedin.com/in/dravid-kumar | Chennai, Tamil Nadu

PROFESSIONAL SUMMARY

Results-driven Full-Stack Developer with expertise in building scalable web applications and automated data pipelines. Proven track record of independently architecting production systems handling 765+ textbooks and 10,000+ digital pages. Skilled in Python (Django, FastAPI), Node.js (Express.js), and GenAI integration. Strong problem-solver who successfully completed an MCA while playing professional cricket, bringing discipline, leadership, and time management to engineering challenges.

TECHNICAL SKILLS

Backend: Python, Django, FastAPI, Node.js, Express.js, REST APIs
Frontend: JavaScript (ES6+), HTML5, CSS3, Bootstrap, DOM Manipulation
Data & AI: GenAI APIs (OpenAI, Claude), PyPDF2, pdfplumber, ETL Pipelines, JSON, Markdown
Databases: PostgreSQL, MySQL, MariaDB
DevOps & Tools: Linux (Ubuntu/RHEL), Apache, Nginx, Git, GitHub, AWS (Training)
Concepts: W3C Web Annotation, REST Architecture, Async Programming, Config-Driven Design

PROFESSIONAL EXPERIENCE

Python Developer   May 2025 – Present
TNQ Technologies   *Chennai, Tamil Nadu*

- **Samacheer Kalvi Content Automation Platform**
- **GenAI Content Pipeline** (Python, FastAPI, OpenAI/Claude APIs, PyPDF2): Engineered a bulk-processing ETL pipeline utilizing GenAI APIs to extract unstructured text from PDF binary streams and convert it into structured Markdown/HTML, enabling digitization of 765+ legacy textbooks with 95%+ accuracy through intelligent prompt engineering and response validation.
- **Automated System Architecture** (Python, JSON, Node.js, Express.js): Architected a config-driven automation system using JSON manifests to manage 765+ static textbooks, eliminating hard-coded paths and enabling dynamic content delivery with intelligent routing middleware handling 10,000+ textbook pages.
- **Accessibility Engine** (JavaScript, Web Speech API): Developed real-time Text-to-Speech module with word-level synchronization and custom event handlers, highlighting text dynamically as spoken to assist students with learning disabilities.
- **Observability & Logging** (Python): Built automated status reporting scripts logging extraction success/failure rates across thousands of files, generating detailed verification reports with completion percentages and error diagnostics.

- **PDF Extraction Microservice**
- **High-Performance API** (FastAPI, Python, Pydantic): Developed production-ready RESTful microservice with asynchronous processing, serving 20+ concurrent users with dual-mode extraction (full books/specific lessons) and auto-generated Swagger documentation.
- **Smart Caching Layer** (Python, File I/O): Engineered caching mechanism with persistent storage reducing redundant upstream downloads by 80%, implementing cache invalidation logic for frequently accessed textbooks.
- **Google Drive Integration** (gdown, Python): Implemented automated book download system from Google Drive with retry logic and error handling for rate limits.

- **Interactive Annotation System**
- **W3C Standard Implementation** (JavaScript, DOM APIs): Built full-stack annotation platform implementing W3C Web Annotation Data Model with TextQuoteSelector algorithms for accurate text highlighting across 10,000+ educational pages, using prefix/suffix context matching for robust text positioning.
- **Secure File Handling** (Node.js, Express.js, Multer): Developed hybrid storage solution with strict MIME-type validation, supporting multimedia attachments (images, PDFs, documents) up to 10MB with path traversal prevention and file size limits.
- **CRUD & Offline Support** (JavaScript, LocalStorage API): Designed complete CRUD operations with LocalStorage fallback, ensuring students can create, view, edit, and delete notes even with intermittent internet connectivity.

Python Full-Stack Developer Intern   December 2024 – April 2025
Accent Techno Soft   *Coimbatore, Tamil Nadu*

- **Sports Event Management System** (Django, Python, Bootstrap, PostgreSQL): Designed platform for player/team registration with role-based access control (RBAC), secure authentication, and session handling for admin and player roles.
- **Database Optimization** (Django ORM, PostgreSQL): Refactored queries using select_related() and prefetch_related(), reducing admin dashboard query execution time by 40% through efficient database indexing.
- **Full-Stack Development** (Django, HTML/CSS, Bootstrap): Gained hands-on experience in requirements gathering, database schema design, responsive frontend development, and production deployment.

KEY PROJECTS

AI-Powered Education Query Platform | *Python, Django, JavaScript, OpenAI API*
- **GenAI Integration** (OpenAI API, Python): Created intelligent query system for Tamil Nadu Samacheer syllabus, integrating OpenAI models to process student questions based on class, subject, and query type.
- **Dynamic Frontend** (Django Templates, JavaScript): Built responsive Django forms with real-time result displays, implementing error handling, rate limiting, and secure API key management for production readiness.

EDUCATION

Kongu Arts & Science College   Tamil Nadu, India
Master of Computer Applications (MCA) – CGPA: 8.2/10   *2023 – 2025*
Kongu Arts & Science College   Tamil Nadu, India
Bachelor of Science in Computer Science – CGPA: 7.57/10   *2020 – 2023*

ACHIEVEMENTS & LEADERSHIP

Engineering Impact: Successfully architected and delivered 3 production-grade systems independently within 10 months.
Professional Cricket: Captained U14, U16, U19 Tiruppur District teams; Represented Tamil Nadu Colts (Baroda Tour 2023).
Discipline: 5+ years of TNCA League experience, demonstrating consistent execution under pressure.

ADDITIONAL INFORMATION

Languages: English (Professional), Tamil (Native)
Location: Chennai, Tamil Nadu — Open to relocation