

01 EXECUTIVE PROFILE

Hands-on Staff Software Engineer with 7+ years of experience building high-reliability backend systems, developer tooling, and applied AI pipelines. Creator of **HyperDjango** (server-driven framework with native Server-Sent Events and automated Vite asset pipelines). Architected and shipped core features for enterprise applications—including **Rezolution Engine**, where my automated extraction and monitoring pipelines processed over **1,000,000 court cases** via Vision LLMs at slashed cloud costs, serving institutional users across major nationalized banks. Combines production engineering rigor (automated regression test suites, containerized Trivy security gating) with first-principles mechanistic understanding of neural networks (gradients, self-attention), LLM fine-tuning (LoRA, post-training alignment), and systems internals.

02 FEATURED OPEN-SOURCE PROJECT

HyperDjango — Creator & Core Maintainer (v0.40+)

Docs ↗ GitHub ↗ `pip install hyperdjango`

- Engineered an open-source server-driven framework for Django combining hypermedia principles with modern meta-framework patterns, eliminating client-side SPA state bloat.
- Implemented **SvelteKit-style file-based routing** (`+page.py` , `template.html` , `partials/`) directly integrated with Django's MTV lifecycle.
- Authored automated **Vite asset bundling pipeline** that dynamically discovers and resolves page-level scripts (`entry.js` , `entry.head.js`) and CSS with zero manual configuration.
- Built a native **Server-Sent Events (SSE) streaming runtime** for low-latency live UI state updates without persistent WebSocket overhead.
- Introduced **typed command-to-query handoffs** (`switch_to`): executes short mutations before cleanly switching into resilient, retryable read streams. Production-dogfooded across multiple internal products.

03 PROFESSIONAL EXPERIENCE

Charing Cross Capital — Technical Co-Founder & Staff Software Engineer

2023 – PRESENT | CHENNAI, INDIA

Technical builder alongside CEO; architected core backend platforms, enterprise gateways, and document intelligence pipelines while establishing company-wide CI/CD testing and container security standards.

■ ENTERPRISE DOCUMENT INTELLIGENCE & APPLIED AI

- Rezolution Engine (India's First Insolvency SaaS Platform):** Built high-throughput ingestion and extraction pipeline parsing **10,000+ dense legal documents** and extracting **1,000,000+ (10 Lakh) court cases** from NCLT cause lists using Cloud Vision LLMs.
- Two-Tier Cost Optimization:** Implemented on-device **Tesseract OCR** to evaluate page layouts and prune non-pertinent pages before calling Cloud Vision LLMs, **reducing token consumption and API bills by 50–60%**.
- Entity Extraction:** Integrated **GLiNER** for zero-shot Named Entity Recognition to accurately extract corporate debtor names from noisy court cause lists.
- Watchlist Alert System:** Built automated litigation monitoring engine that matches court cases against company watchlists and dispatches real-time alerts (**10,000+ match notifications** delivered; utilized by teams across institutions including **State Bank of India** and **Central Bank of India**).
- Internal Lead Generation Engine:** Automated filtering of daily extracted cause lists to identify pronouncement cases, flagging imminent admissions as early leads for Ancoraa's internal insolvency professionals to partner on cases before public notices circulate.
- Document Security & Redaction:** Built tamper-evident dynamic PDF watermarking (user ID, audit trail) in production; engineered **TrustTunnel** (automated PII/PHI redaction) and **Tetrahedron** (SAP knowledge retrieval prototype).

■ B2B ENTERPRISE GATEWAYS & AUTOMATION WORKFLOWS

- Optik Invoice (Touchless AP Automation):** Built automated Accounts Payable pipeline ingesting supplier invoices from email → Vision LLM extraction → cXML mapping → direct automated injection into **SAP Ariba**. Designed an extensible plugin rule-engine for company-specific tax and accounting logic.
- ProcureMesh (Universal PunchOut Gateway):** Architected middleware bridging consumer e-commerce platforms (Shopify, WooCommerce) to enterprise procurement networks (**SAP Ariba Supplier Business Network**) using bidirectional cXML PunchOut protocols.
- SmoothPay (Reconciliation & Automated Signing):** Automated weekly invoice reconciliation for **5,000+ fragmented invoices/week** across multiple client systems. Built multi-tier verification workflows and in-platform cryptographic PDF signing, **reducing manual labor by 80%** (cutting turnaround from 5 days to 1 day).

■ ENGINEERING RIGOR, CLOUD INFRASTRUCTURE & SECURITY

- CI/CD Quality & Security Gates:** Instituted comprehensive test-driven deployment pipelines: pre-merge linting, automated regression testing, and container vulnerability scanning via **Trivy** before automated production promotion.
- Enterprise Multi-Cloud Ops:** Deployed and operated services on **SAP BTP Kyma (Kubernetes)** and **AWS**, ensuring strict enterprise tenant boundary isolation for corporate clients including **UHN**. Orchestrated self-hosted Docker/Compose stacks (PostgreSQL, Redis, Celery, Caddy) on Oracle Cloud, maintaining **99%+ uptime** at minimal operational cost.
- Technical Mentorship:** Guided team members across code quality, API contract design, and transitioning low-code workflows into maintainable engineering practices.

04 PRIOR VENTURES & ENGINEERING ROLES

Waak Labs — Founder & Lead Developer

AUG 2022 – AUG 2023 | CHENNAI, INDIA

- Brickell.com:** Architected luxury real estate platform from scratch in Django, HTMX, Alpine.js, Vite, PostgreSQL, Redis, and Caddy. Handled **20K+ monthly visitors**, reduced bounce rate by **50%**, and built interactive polygon map search with automated neighborhood statistical trends.
- Rezolution Engine (Early AI Prototype):** Designed and deployed GPT-3.5 chatbot API integrated with `pgvector` for semantic document retrieval over the Insolvency and Bankruptcy Code (IBC).
- WeBridge.app:** Designed and built video resume platform for HR candidate shortlisting, featuring invite-only candidate portals and automated screening workflows.

Laagom — Lead Software Engineer

DEC 2020 – AUG 2022 | CHENNAI, INDIA

- Allospaces.com:** Scaled co-working marketplace operating across 13 countries and 500+ space partners (500+ MAU). Built inventory management, credit systems, partner admin dashboards, and Stripe subscription billing.
- Contento AI:** Built early GPT-3 content generator for real estate developers with automated Stripe monetization and Rewardful affiliate tracking.
- JobSkills.in:** Architected multi-tenant government skill development platform for MPBCDC using Django and AWS Elastic Beanstalk, supporting attendance tracking, multilingual workflows, and student/trainer verification.
- Adwiser:** Built insurance grievance management and claim gap-analysis platform (Django, React Native, Twilio, AWS SES).

Early Career — Native Mobile & iOS Engineering

APR 2017 – DEC 2020 | CHENNAI & REMOTE

- iOS App Developer** across contract and agency engagements (**Doodleblue Innovations, Femargent, Learn America LMS / Maha Learning**). Engineered native iOS applications in Swift and Objective-C; built custom UI micro-interactions, LMS exam engines, real-time messaging, and in-app Stripe payment flows.
- Indie & Open-Source Projects:** Built **Tempbox** (open-source macOS disposable email utility in SwiftUI/Combine), **Klip Kutter** (Android video slicing tool with FFmpeg), and **Facepass** (iOS face-recognition utility using OpenCV and Firebase).

05 TECHNICAL SKILLS

Languages & Web:	Python, Django, Django REST Framework, Celery, JavaScript / TypeScript, Vite, Alpine.js, HTMX, SQL, Bash/Zsh.
Applied AI & LLMs (Prod):	Vision LLMs (document extraction), GLiNER (Zero-Shot Named Entity Recognition), Tesseract OCR (on-device layout parsing), <code>pgvector</code> , Semantic Search, OpenAI Multimodal Live API.
DL Mechanics & Systems:	First-principles understanding of neural network forward/backward gradient flows, multi-head self-attention mechanics, PEFT / LoRA & QLoRA adapter rank decomposition, post-training alignment (DPO, RLHF); actively studying inference engineering (KV-cache management, quantization).
CI/CD, Security & OS:	Automated regression test suites, container security scanning (Trivy), Linux system internals (process model, memory, syscalls), Nix / nix-darwin reproducible configs, Neovim, Docker & Compose, Caddy.
Enterprise & Cloud:	cXML PunchOut Protocol, SAP Ariba, SAP Business Network, SAP BTP Kyma (Kubernetes), AWS (EC2, S3, SES, Beanstalk), Microsoft Graph API, Razorpay, Stripe.
Databases & Caching:	PostgreSQL, Redis, Celery distributed task queues, vector search (<code>pgvector</code>).

06 EDUCATION & CREDENTIALS

B.S.A Crescent Institute of Science & Technology — Chennai, India

SEP 2016 – JUL 2020

Bachelor of Technology (B.Tech) in Computer Science & Engineering • GPA: 8.7 / 10.0