

Kushal Pugalia

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EDUCATION

- **MIT World Peace University** Pune, Maharashtra
B.Tech. in Computer Science (AI & Data Science) *Jun 2022 – Jul 2026*

EXPERIENCE

- **AI/ML Engineer – Volody Products** On-Site
Backend Automation and RAG Integration *Jan 2026 – Current*
 - Designed and deployed scalable cloud-based Python applications on AWS EC2, S3, and Lambda for judgment extraction and metadata processing across 10+ judicial systems.
 - Automated backend workflows for legal document management using Python, Flask, and Celery, reducing manual intervention time by 40%.
 - Developed and optimized RESTful APIs and SQL pipelines with PostgreSQL to handle streaming data, improving query efficiency by 30%.
 - Built secure Flask-based API endpoints for case data retrieval, search, and updates, with comprehensive testing and documentation using Postman.
 - Integrated advanced case-tracking modules including Fetch, Re-Fetch, and Force Fetch into the Volody CLM platform, deployed in the Adani Natural Resource Project.
 - Developed automated web scraping pipelines for retrieving case data from NJDG portals across District, High, and Supreme Courts, processing 100K+ records.
 - Implemented Azure OpenAI GPT-4o Vision for automated CAPTCHA solving, achieving 95% success rate across protected judicial portals.
 - **Tech Stack:** Python, Flask, Celery, PostgreSQL, AWS (EC2, S3, Lambda), Azure OpenAI, Web Scraping, REST APIs, Postman.
- **Software Development Engineer – LawxyAI - Volody Products** On-Site
AI, Data Engineering, Full Stack Development *Jan 2026 – Present*
 - Led end-to-end development of LawxyAI.com: built ETL pipelines for 30+ Indian courts, developed FastAPI backend, React (Next.js) frontend, and deployed on **AWS (EC2, S3, RDS, Lambda)**.
 - Developed complex **AI-powered legal modules** (Research, Document Q&A, Drafting, Case Analyzer) using **LLM orchestration, RAG pipelines, and real-time web search**.
 - Built a **personalized sales outreach automation system** using LangGraph, n8n, and Playwright, enabling end-to-end lead generation to conversion.
 - Engineered a **multi-platform content automation system** generating and publishing real-time content across LinkedIn, X, and Medium using cron-based pipelines and LLMs.
 - **Tech Stack:** Python, FastAPI, Next.js, React, LangGraph, n8n, LLM APIs, RAG, PostgreSQL, Docker, **AWS (EC2, S3, RDS, Lambda)**.

SKILLS

- **Languages:** Python, SQL, C++
- **AI/ML:** LLM Orchestration, RAG, LangChain, Transformers, Prompt Engineering, LLMs, NLP, Computer Vision, Feature Engineering, Fine-tuning (LLMs/SLMs), AI Agents, Scikit-learn, TensorFlow, PyTorch
- **Backend & Frameworks:** FastAPI, Flask, Django, Django REST Framework, Streamlit, PyQt5, REST APIs, Celery
- **Cloud & DevOps:** AWS (EC2, S3, RDS, Lambda, Bedrock), Azure (Blob Storage, OpenAI, Vector Store), Docker, Kubernetes, CI/CD, Git, GitHub
- **Data Engineering & Databases:** ETL Pipelines, Web Scraping, Data Processing, Data Normalization, PostgreSQL, MySQL, MongoDB, MSSQL, Redis
- **Libraries & Tools:** Pandas, NumPy, OpenCV, BeautifulSoup, Selenium, Requests, Playwright, Tesseract OCR, Postman, Boto3, pycpg2, pymysql, Power BI, Grafana, n8n, logging

PROJECTS

• GST Autopilot AI

- Problem: Manual GST reconciliation and notice handling costs Indian businesses 100+ hours/month. **Built a full-stack AI compliance platform** that automates reconciliation, filing, and notice analysis – cutting ITC mismatch resolution by 70%.
- Developed FastAPI microservices with JWT auth, async processing, and scalable APIs for returns, reconciliation, and compliance management.
- Engineered a 3-way reconciliation engine matching Purchase Ledger vs GSTR-2A/2B – **reducing compliance discrepancies by 90%** for 50+ SMEs.
- **Tech:** Python, FastAPI, Next.js 14, PostgreSQL, Redis, Prisma, Tailwind CSS, NLP, REST APIs.

• Enterprise Property Due Diligence System

- Problem: Legal due diligence for property loans takes 3–5 days per case. **Automated OCR, document processing, and Maharashtra IGR scraping** – enabling same-day LSR/SR report generation.
- Architected FastAPI backend with Celery, Redis, and S3 for async OCR/ETL pipelines, supporting real-time verification across 100+ concurrent users.
- Integrated SSO, JWT entitlements, and editable report workflows – **cutting document verification time by 35%** and saving a hefty amount in annual legal costs.
- **Tech:** Python, FastAPI, PostgreSQL, Redis, Celery, S3, OpenAI API, Tesseract OCR, Docker, AWS.

• Nationwide Judicial Data Ingestion Platform

- Problem: Indian courts store case data across 50+ portals with no unified API. **Architected a serverless ETL platform** ingesting 100K+ case records from Supreme Court, High Courts, District Courts & NJDG.
- Built session-aware scrapers handling CSRF tokens, AJAX workflows, CAPTCHA solving, and multi-step authentication – achieving 99.5% ingestion success.
- Designed PostgreSQL schemas with incremental ingestion, storing 50K+ court order PDFs on S3 – **powering real-time legal analytics for 10+ enterprise clients**.
- **Tech:** Python, AWS Lambda, S3, RDS, PostgreSQL, BeautifulSoup, Azure OpenAI, ETL Pipelines.

• Personalized Sales Outreach Automation

- Problem: Generic sales emails get ~2% reply rates. **Built an LLM-based outreach engine** that generates hyper-personalized LinkedIn messages and cold emails – boosting conversion to 15%+.
- Developed automated prospecting pipelines with Playwright + n8n, enabling 10K+ leads/month to be enriched and sequenced without manual effort.
- Integrated campaign management, dynamic personalization, and workflow orchestration – **saving 80% of sales development time** for B2B SaaS teams.
- **Tech:** Python, FastAPI, React, n8n, Playwright, OpenAI API, LLM Orchestration.

ACHIEVEMENTS & HACKATHONS

- **BITS Pilani National Hackathon – Winner:** Built the most optimum end-to-end solution prototype in 36 hours among 100+ teams participating from all over the country.
- **Student Achiever Award – MIT World Peace University:** Recognized for outstanding academics, innovative project works, and broad involvement in social and extracurricular activities among a graduating class of 322 students.
- **Meritorious Student Award – NIT Goa:** Recognized as meritorious student among 200+ participants in the immersive program on Machine Learning and Deep Learning.

SUMMARY

- Final-year CS (AI & Data Science) engineer with **2 production systems shipped to market** (GstAutoPilot, LawxyAI), a **national hackathon win** (BITS Pilani, 100+ teams), and a track record of delivering ML and GenAI products end-to-end – from architecture to cloud deployment. Fluent across FastAPI backends, RAG pipelines, LLM fine-tuning, and AWS infrastructure. Proficient in LLM orchestration, RAG pipelines, NLP, and MLOps with a track record of deploying scalable AI systems on AWS. Proven results through hackathon wins and end-to-end deployed projects spanning computer vision, predictive analytics, and LLM-powered applications