

NIKHIL BANSAL

Product Engineer · AI Systems Builder · Full-Stack

9958695355 · bn5799@gmail.com · Bengaluru · www.nikhilbansal.dev

SUMMARY

Full-stack engineer with 4+ years building end-to-end AI-powered systems. Experienced in designing and shipping production LLM pipelines — RAG architectures, agentic systems, and intelligent data platforms. Currently building NestIQ, an AI-driven rental intelligence product, applying large language models to real-world unstructured data at scale. Deep Python fluency; hands-on with LangChain, LangGraph, VectorDBs, and advanced prompt engineering. AWS AI Practitioner certified. Motivated by impactful engineering - work that impacts people and solves real world problems.

PROJECTS

NestIQ — AI-Powered Rental Intelligence Platform *2026 – Present*

Solo founder · Python, LLMs, web scraping, data pipelines

- Architecting an end-to-end AI pipeline that ingests rental listings at scale via web scraping, normalises heterogeneous unstructured data, and applies LLM-based analysis to surface actionable insights for renters.
- Aggregating listing signals across sources to detect pricing anomalies, suspicious patterns, and data quality issues — building structured intelligence out of messy, real-world data.
- Owning the full data loop: scraping → cleaning → LLM inference → structured output; continuously optimising for factual accuracy and output reliability.
- Building lightweight evaluation harnesses to measure LLM output quality across varied listing types — testing model behaviour on real-world noisy inputs.

LEX — Legal AI Assistant *Jan – Mar 2025*

Python, RAG (FAISS), Claude Sonnet, LangChain

- Built an AI legal assistant handling 16,000+ queries/year using FAISS-backed RAG, significantly reducing paralegal workload and demonstrating strong retrieval-grounded accuracy on high-stakes queries.
- Designed retrieval pipelines with hybrid search and re-ranking; implemented output validation to detect and reduce hallucinations on sensitive legal content.

EXPERIENCE

Software Engineer II | Commonwealth Bank of Australia *06/2022 – Present*

AI & data engineering platform · Python, Flask, LangGraph, AWS

- **Neo (Internal AI Platform):** Co-founded and built end-to-end (Flask + JS); now the central data engineering hub with 400+ monthly interactions. Designed architecture, shipped iteratively, and validated adoption — the full cycle from prototype to org-wide deployment.
- **Text-to-SQL Agent:** Built a production LLM agent using LangGraph and advanced RAG architecture enabling 40+ teams to query operational metadata in plain English; involved prompt engineering, retrieval accuracy optimisation, and output validation at scale.
- **Intelligent Chatbot (Principal Agent Architecture):** Designed a multi-agent routing system that dispatches queries across knowledge search (Confluence/Jira) and observability systems — real experience with model-level routing, tool use, and agentic failure modes.
- Led backend development for Greenfield, a self-service AWS data platform (Flask, Airflow, PostgreSQL, ECS) serving 30+ internal teams — engineering infrastructure at organisational scale.
- Designed and shipped a Pipeline Builder Wizard enabling engineers to construct complex data pipelines via click-driven UI, eliminating manual YAML/JSON config.
- Organised AI-lympics 2024 Hackathon, driving AI innovation and cross-team experimentation across the engineering org.

Data Solutions Engineer | Hevo Data06/2021 – 05/2022

Data pipelines · Kafka, Salesforce, Google Ads, Redshift, BigQuery, MongoDB, Snowflake

- Built real-time streaming data pipelines processing 3B+ records/month across Redshift, BigQuery, MongoDB, and Snowflake — direct infrastructure and distributed systems experience.
- Integrated SQL/NoSQL databases, Kafka, Salesforce, and Google Ads for US and European clients; managed 25+ accounts delivering \$70,000+ revenue in 6 months.

Software Engineer Intern | Publicis Sapient01/2021 – 05/2021

- Built Angular web applications; contributed 1,000+ lines of code, resolved 20+ critical issues, and improved performance by 60%.

TECHNICAL SKILLS

AI & ML: LangChain, LangGraph, Advanced RAG (FAISS, hybrid search), Prompt Engineering, Agentic Systems, Claude API, OpenAI API

Languages: Python (primary), SQL, JavaScript, TypeScript

Backend & Cloud: Flask, FastAPI, AWS (ECS, RDS, S3, DynamoDB, Redshift), Docker, Airflow

Databases: PostgreSQL, MongoDB, Snowflake, BigQuery, DynamoDB

Frontend: React, Angular, HTML/CSS, Vanilla JS

CERTIFICATIONS & EDUCATION

AWS Certified AI Practitioner — Amazon Web Services, November 2025

B.Tech, Electronics & Communications Engineering — Manipal Institute of Technology · GPA 8.4/10 · 2017–2021