

# JOSHUA CHARLES

Senior Lead AI/ML Engineer | AI Platforms, Backend Systems & Cloud Architecture

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## SUMMARY

Senior Lead AI/ML and Backend Engineering professional with **15+ years of experience** building and scaling enterprise-grade AI, data, and cloud platforms across fintech, consulting, and high-growth environments.

Extensive experience delivering **LLM-powered systems, ML pipelines, and mission-critical backend services** from design to production.

Strong background in cloud architecture, MLOps, and platform reliability, with a proven ability to align technical execution with business goals and lead cross-functional teams.

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## CORE EXPERTISE

**AI / ML & Data:** LLMs (OpenAI / GPT APIs), RAG Architectures, NLP, ML Pipelines, Feature Engineering, Model Deployment & Monitoring, ETL/ELT, Airflow, Spark, Data Warehousing

**Backend & Platform:** Python, Node.js, FastAPI, Django, Flask, REST & GraphQL APIs, Microservices, Event-Driven Systems

**Cloud & MLOps:** AWS, Azure, GCP, Kubernetes, OpenShift, Docker, Terraform, CI/CD, GitOps, Observability, SRE

**Delivery & Leadership:** Technical Program Leadership, Architecture Ownership, Agile Delivery, Stakeholder Management, Mentorship

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## PROFESSIONAL EXPERIENCE

### Lead Data Engineer / AI Engineer (Contract)

Gravitate | Aug 2024 – Nov 2025

- Designed and built ETL pipelines processing **500M+ records per day** using **Python and Apache Airflow**.

- Improved pipeline performance by **35%** through tuning, optimization, and automated data validation.
- Developed **GPT-powered assistants** for deal analysis, investor Q&A, and automated insights.
- Integrated LLM solutions securely with internal data platforms and APIs.
- Built analytical and ML models to improve deal discovery accuracy by **25%**.
- Worked closely with product and business teams to deliver scalable, data-driven solutions.
- Implemented monitoring and alerting to ensure reliable production data and AI pipelines.

## **Technical Project Manager**

**Prosa.ai** | Sep 2023 – Dec 2024

- Owned end-to-end delivery of AI-driven NLP, chatbot, and document intelligence platforms, from requirements discovery through production deployment.
- Led architecture and hands-on development of full-stack solutions, building backend services with FastAPI and Python and frontend applications using React.
- Translated complex business requirements into technical roadmaps, system designs, and sprint plans, ensuring alignment across engineering, product, and stakeholders.
- Managed and mentored cross-functional teams to deliver AI-powered automation systems, achieving 35% operational efficiency improvements.
- Ensured scalable, secure, and reliable deployments using Docker, Kubernetes, and cloud-native best practices, with a focus on performance, security, and maintainability.

## **Senior DevOps / SRE / AI Platform Engineer**

**Grant Thornton** | Aug 2024 – Mar 2025

- Led cloud modernization of AI and data platforms on Azure using Terraform.
- Built secure CI/CD pipelines and implemented platform observability.

**CIBC** | Jul 2022 – May 2024

- Designed multi-cloud CI/CD pipelines supporting AI and analytics workloads.
- Implemented observability and security controls across ML platforms.

**Loblaw's Canada** | Jun 2021 – Jul 2022

- Managed Kubernetes and OpenShift platforms for AI-enabled applications, ensuring high availability and reliability.

## **Senior Software Engineer**

**DevX Innovations** | Apr 2020 – Aug 2022

- Built scalable backend and full-stack systems using Python, Django, and React.
- Improved backend performance by **30%** and reduced defects by **35%**.

## Backend & Full-Stack Engineer

**FinTech Solutions Ltd.** | Apr 2019 – Jan 2020

- Built real-time analytics dashboards and data pipelines, reducing decision-making time by 30%.
- Implemented WebSocket-based communication systems, increasing user engagement by 25%.

## Backend Engineer

**CloudTech Systems** | Mar 2017 – Jan 2019

- Developed and maintained scalable backend services using PHP and Laravel to support high-traffic applications.
- Designed and implemented RESTful APIs for internal and external integrations.
- Worked extensively with MySQL, including schema design and query optimization.
- Optimized database queries, indexing strategies, and transaction handling for high-volume workloads, improving query performance by 50%.
- Improved overall system reliability and stability by 30% through code refactoring, error handling, and performance tuning.
- Collaborated with frontend and infrastructure teams to ensure smooth deployments and system scalability.

## Frontend Developer

**Digital Innovations** | Aug 2015 – Jan 2017

- Developed responsive, high-performance web interfaces using Javascript and React.
- Improved page load times by up to 40% through frontend optimization techniques.

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## EDUCATION & CERTIFICATIONS

**MBA**, SCDL University

**Bachelor of Commerce**, University of Delhi

**Certifications:** PMP®, AWS Certified Solutions Architect – Associate, Microsoft Azure Administrator & Solutions Architect Expert, CompTIA Security+, Cloud+, PenTest+

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## TECHNOLOGIES

Python, JavaScript, TypeScript, SQL · TensorFlow, PyTorch · OpenAI APIs, RAG · Airflow, Spark · AWS, Azure, GCP · Kubernetes, Docker, Terraform