

TRYAMBAK KAUSHIK, PhD

ENTERPRISE AI | CLOUD & DATA PLATFORMS | SOFTWARE ENGINEERING

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PROFILE

Engineering leader with 15+ years across enterprise AI, software, cloud architecture, large-scale data platforms, and multidisciplinary delivery. Builds secure, production-ready systems from strategy and architecture through implementation, deployment, and operations. Experience includes generative AI, distributed data systems, MLOps, Kubernetes, and cloud platforms across GCP, AWS, and Azure.

SELECTED IMPACT

- Independently built a full-stack enterprise AI alternative to a multi-million-dollar external platform, adopted by sales, marketing, and other customer-facing teams.
- Delivered within a telecom data-platform organization responsible for petabyte-scale data, combining AI application development with enterprise governance, security, and production operations.
- Architected cloud data platforms and migration pipelines spanning Spark, Kafka, Airflow, Apache Hudi, data warehouses, and infrastructure as code.
- Led proposal development and technical evaluation for CAD \$1M+ in contracts, partnering with executive leadership through selection and award for infrastructure serving First Nations communities.

CORE EXPERTISE

AI/ML: Generative AI, Gemini function calling, NLP, forecasting, PyTorch, TensorFlow, scikit-learn | **Cloud:** GCP, AWS, Azure | **Platforms:** GKE, Kubernetes, Docker, BigQuery, Cloud Run, App Engine, Databricks, Redshift, EMR, Glue, SageMaker | **Data:** Python, SQL, Spark, Kafka, Airflow, Apache Hudi, MDM, ETL/ELT | **Delivery:** Terraform, GitHub Actions, Cloud Deploy, CI/CD, observability, data governance

PROFESSIONAL EXPERIENCE

Senior Technology Architect | TELUS, Canada | May 2023–Present

- Build and operate enterprise AI and data solutions on GCP for a telecom data platform supporting petabyte-scale information assets.
- Independently developed a full-stack BigQuery assistant using Gemini function calling, Django/HTMX, GKE, BigQuery, and Cloud SQL; the solution was adopted by sales, marketing, and other customer-facing teams.
- Implemented production delivery with GitHub Actions, Cloud Deploy, Terraform, Cloud Logging, and Kubernetes operational tooling; added reusable deployment and DevOps capabilities for the internal team.
- Developed additional AI assistants for Oracle-backed enterprise data and video question answering using React/Django and Go on Cloud Run and App Engine.
- Collaborate with business and technical stakeholders on architecture, security, governance, and release decisions for enterprise AI and data workflows.

Senior Data Engineer | Wavicle Data Solutions, Quebec, Canada | Aug 2022–Mar 2023

- Built automated ETL pipelines and cloud data-warehouse solutions for enterprise clients using Redshift, BigQuery, and CI/CD delivery practices.
- Translated client requirements into scalable data-platform implementations across cloud analytics services.

Senior Data Engineer | Syntax Cloud Inc., Ontario, Canada | Mar 2021–Jul 2022

- Architected AWS and Azure data platforms, including Spark processing, Kafka streams, MDM/XREF models, and enterprise ETL pipelines.
- Led migration of on-premises systems to an AWS data lake using S3, EMR, Glue, Redshift, MWAA/Airflow, Apache Hudi CDC, and Terraform/CloudFormation.
- Developed cloud billing analytics and dashboards, evaluated cost-saving opportunities, and worked with clients through weekly feedback cycles.

PROFESSIONAL EXPERIENCE (CONTINUED)

Engineer | Arcadis Canada Inc., Richmond Hill, Canada | Mar 2018–Mar 2021

- Coordinated multidisciplinary technical teams and stakeholders on complex infrastructure programs.
- Led proposal development and technical bid evaluation for CAD \$1M+ in contracts, working with a Vice President through contractor selection and award for First Nations communities.

Senior Design Engineer | Infrastructure Technologies, Noida, India | Aug 2016–Mar 2018

- Led technical design work, guided junior engineers, and coordinated client delivery for infrastructure projects.

Technical Professional | Wood plc, Charlotte, USA | Feb 2015–Jun 2016

- Developed analytical models, technical designs, proposals, and project documentation for industrial facilities.

Research Assistant | UNC Charlotte, USA | Jan 2014–Jan 2015

- Conducted research in structural health monitoring and sensor-based infrastructure analytics.

Research Assistant | Michigan State University, USA | Aug 2009–Dec 2013

- Completed doctoral research on dynamic infrastructure systems; designed experiments, analyzed data, and provided technical instruction and assessment.

Assistant Manager | Ircon International Ltd., Kuala Lumpur, Malaysia | Jul 2007–Aug 2009

- Managed railway infrastructure operations, coordinating international teams, contractors, and delivery milestones.

SELECTED TECHNICAL WORK

- **Enterprise AI data access:** Natural-language interfaces for BigQuery and Oracle using Gemini, Django, HTMX/React, GKE, Cloud SQL, and governed SQL execution.
- **ML forecasting:** Automated data preparation, AWS Forecast modeling, and result integration with SageMaker, Python, S3, and Redshift; achieved approximately 90% accuracy for stable inventory items while identifying weak-performing series.
- **Applied deep learning:** Implemented semi-supervised GANs, reinforcement-learning actor-critic systems, RNN/attention/transformer comparisons, recommender-system research, and NLP topic modeling in PyTorch and Python.

CERTIFICATIONS EARNED

Google Professional Cloud Architect | AWS Certified Solutions Architect - Professional (SAP-C01) | AWS Certified Data Analytics - Specialty (DAS-C01) | Microsoft Azure Data Engineering (DP-203)

EDUCATION

PhD, Civil Engineering, Michigan State University, 2014 | **MS, Civil Engineering**, Michigan State University, 2013

MTech, Civil Engineering, Indian Institute of Technology Delhi, 2007 | **BTech, Civil Engineering**, National Institute of Technology Durgapur, 2005