

# Zeeshan Yalakupalli

Cloud Data Engineer

Bachelor of Engineering

HKBK College of Engineering, Bengaluru

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🐙 [GitHub Profile](#)

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## EDUCATION

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### · Bachelor of Engineering in Computer Science and Engineering

HKBK College of Engineering, Bengaluru (Affiliated to Visvesvaraya Technological University – VTU)

2022-2026

CGPA: 8.75/10

## EXPERIENCE

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### · Hostup Cloud Technologies Pvt. Ltd

Aug 2025 – Oct 2025

#### Software Engineer Intern

on-site | Bengaluru

- Developed & deployed **cloud-native applications** using Next.js, implementing **authentication, ticketing systems, and bare-metal grid management application** reducing page load times by **35%**, improving scalability.
- Worked closely with senior engineers to architect backend features and integrate functional elements.
- Gained practical exposure to standard deployment pipelines and modern cloud infrastructure management

## PROJECTS

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### Healthcare Data Pipeline — Batch & Streaming

**Tech Stack:** Apache Beam, GCP Dataflow, Cloud Pub/Sub, BigQuery, Docker, Python

- Built end-to-end batch and streaming pipelines processing 4,500+ hospital records, deployed to auto-scaling GCP Dataflow workers.
- Implemented HIPAA-style PII de-identification (salted SHA-256), dead-letter routing, and anomaly detection to flag 265 high-risk hospitals in real-time BigQuery sinks.
- Handled live admission events using Cloud Pub/Sub with 5-minute fixed/sliding windows, gracefully managing late-arriving data via Beam watermarks to prevent data loss.

### Real-Time Crypto Streaming Pipeline

**Tech Stack:** GCP (Cloud Functions, Pub/Sub, BigQuery, Cloud Scheduler), Python

- Engineered an automated pipeline ingesting BTC/ETH/SOL prices every 60 seconds, achieving under 2-second end-to-end latency.
- Designed a rigorous data quality validation layer, rejecting malformed records to maintain 100% data integrity across continuous ingestion.
- Configured Pub/Sub dead-letter topics with retry policies for fault-tolerant delivery and orchestrated execution via Cloud Scheduler with zero manual intervention.

### BigQuery Data Warehouse for NYC Taxi Dataset

**Tech Stack:** BigQuery, SQL, Data Modeling

- Designed and deployed a robust two-layer warehouse architecture (RAW → CURATED).
- Processed millions of NYC Taxi records, establishing an immutable RAW layer and developing CURATED fact tables optimized for high-performance analytics.
- Applied BigQuery table partitioning strategies to significantly reduce query data scan costs.

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** Java, Python, JavaScript, TypeScript, HTML5 & CSS, Tailwind, SQL

**Libraries & Frameworks:** Node.js, Next.js, React, Angular, Python Libraries

**Tools and Technologies:** VS Code, Git, GitHub, Docker, Redis, Kubernetes, CI/CD, GitLab, Postman, Linux

**Cloud & Databases:** Google Cloud, MongoDB, MySQL (Relational DB), Firebase, PostgreSQL, NoSQL

**Data Engineering:** Apache Beam, Stream Processing, Windowing & Watermarks, Airflow Orchestration, API Data Ingestion, PII Masking, Dead Letter Queuing

**Cloud Platforms:** Google Cloud Platform (GCP), BigQuery, Cloud Dataflow, Cloud Pub/Sub, Cloud Storage, Cloud Functions, Cloud Scheduler

**Soft Skills:** Problem Solving, Agile Development, Self-Learning, Presentation, Adaptability, Collaboration

## ACHIEVEMENTS

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- Achieved Grade A+ in Competitive Programming assessments.
- Recipient of the prestigious Maymar Charitable Trust Scholarship and Zenith Foundation Academic Award.
- Secured 1st Prize in the college Science Fest for the design and presentation of a Wind Turbine Model.
- **Research Paper Published:** AI-Powered Automated Bug Bounty Platform registered as a peer-reviewed preprint (DOI: 10.20944/preprints202506.1363.v1), June 2025.
- **Research Paper Published:** AI Powered Automation Bug-Bounty Platform accepted for oral presentation at the 5th SGCNSP-2025 (Singapore) and publication in Springer's Lecture Notes in Electrical Engineering, December 2025.