

Ritwik Kapoor

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EXPERIENCE

Accenture

Oct 2024 – Present

Associate Software Engineer

- Engineered event ingestion pipelines using **mParticle** and **Gravitee webhooks**, processing **35M+ requests/day** with **p50/p95/p99 latency of 5/9/12ms**.
- Automated GCP infrastructure provisioning with reusable **Terraform** modules for **Cloud Run, VPC, GCS, and BigQuery**.
- Developed scalable **Python** services on **Cloud Run Service** with **Confluent Kafka** and **BigQuery**, handling **4K requests/sec** and reducing cold-start latency from **60ms to 12ms**.
- Automated data collection and processing with **Cloud Run Job**, fetching category-based data from the **Google Places API** and loading it into **BigQuery** using multithreading and quota management.
- Implemented a **Cloud Run Job** to stream data from **BigQuery** to **Confluent Kafka**, using sharding to enable parallel processing and improve throughput.
- Built and utilized internal AI agents leveraging prompt engineering and GitHub Copilot to automate unit test generation and enhance code quality analysis, reducing manual testing effort by **40%**.

EDUCATION

JSS Academy of Technical Education, Noida

Dec 2020 - Aug 2024

B.Tech Computer Science

TECHNICAL SKILLS

- **Languages:** Java, Python
- **Frameworks:** NodeJS, ExpressJS, Flask
- **Databases:** MySQL, MongoDB
- **DevOps:** AWS, GCP, Docker, GitHub Actions, Terraform, Kubernetes, CI/CD
- **Tools & Technologies:** Linux, Git, GitHub, Nginx, Redis, Confluent Kafka

PROJECTS

Medicify - Doctor Appointment platform

- Developed a full-stack doctor appointment platform using **MongoDB, Express.js, React.js, Node.js**, with **Redux Toolkit** and **Tailwind CSS**; implemented appointment scheduling, reviews, ratings, and an admin dashboard.
- Integrated **Razorpay with webhooks** for payments, **BullMQ** and **AWS SES** for asynchronous appointment emails, and **Redis** for caching doctor data; deployed machine learning APIs using **Flask** and pickle.
- Containerized the application with **Docker** and deployed it on an **Azure VM** using **Nginx** and **PM2**, enabling reliable cross-environment deployment and process management.

[Source Code](#)

Golang Web App

- Developed a simple static website using **Golang**.
- Provisioned a **DigitalOcean Kubernetes Cluster** using **Terraform**, deployed the application via **Nginx Ingress Load Balancer**.
- Wrote a CI pipeline using **Github Actions** to test the code, push the image to Dockerhub, and update the tag in helm charts. Used **ArgoCD** to perform Continuous Delivery and automated deployment to **Kubernetes Cluster**.

[Source Code](#)

ACHIEVEMENTS

- Published research paper in Springer: "*Prediction of Health Insurance Premium Using XGBoost Algorithm*" [Link](#).
- Achieved a peak rating of 1725 on **LeetCode**, placing in the top 10% globally, demonstrating strong problem-solving and algorithmic skills.

CERTIFICATIONS

- Successfully cleared the Japanese-Language Proficiency Test (JLPT) N4 in 2026.