

SHIVAM TRIPATHI

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WORK EXPERIENCE

LTM (LTIMindtree)

Aug 2025 – Present

Software Engineer

Pune, India

- Developed **FastAPI** distributed microservices to support high-throughput backends handling production traffic.
- Designed an event-driven architecture using **AWS SNS/SQS** to decouple services, **reducing API latency by 35%**.
- Integrated **AWS X-Ray** and **CloudWatch** for distributed tracing, significantly reducing multi-service debugging time.
- Orchestrated distributed workflows using **AWS Step Functions** and **Lambda**, **boosting processing efficiency by 50%**.

Ramanujan Universe

Jun 2024 – Jul 2024

High Performance Computing Research Intern

Noida, India

- Implemented OpenMP-based multithreading for frame preprocessing and Non-Max Suppression in a YOLO object detection pipeline, reducing per-frame processing latency on CPU-optimized EC2 instances for real-time traffic identification.
- Eliminated a 51% system bottleneck by profiling and streamlining data serialization layers.
- Automated CI/CD pipelines via AWS CodePipeline and CloudFormation, **cutting provisioning times by 70%**.
- Reduced test suite runtimes to 25% of original duration by optimizing Pytest workflows.

EDUCATION

Jaypee University of Engineering and Technology

Jul 2021 – Jun 2025

Bachelor of Technology in Computer Science and Engineering | CGPA 8.7

Guna, MP, India

TECHNICAL SKILLS

Languages: C, C++, Python, Java, JavaScript, SQL

Libraries/Frameworks: React.js, Next.js, Redux, Node.js, Django, Flask, FastAPI

Tools/Platforms: Git, GitHub, Docker, Pytest, CI/CD, Bash, Linux

Cloud & DevOps: Serverless Architecture (Lambda, Step Functions), AWS (EC2, ECS, RDS, DynamoDB, Kinesis), CI/CD (CodePipeline), CloudFormation

Databases: MySQL, PostgreSQL, DynamoDB, Redis

ACADEMIC AND PERSONAL PROJECTS

LinkSnip – Distributed URL Shortener Platform | *FastAPI/Node.js, AWS Cloud Services* | [GitHub](#) | [Live](#) Apr 2026 – Jul 2026

- Architected a decoupled write path using API Gateway and Load Balancers to scale short-code generation.
- Achieved sub-millisecond latency** for GET redirects by serving destination mappings directly from a CDN edge.
- Engineered a real-time analytics pipeline using **AWS Kinesis** and **DynamoDB** to process tracking data off-path.
- Streamlined infrastructure provisioning by integrating **CodePipeline** for continuous deployment workflows.

Microservices Food Ordering Application | *React.js, AWS SQS/SNS, S3, Docker* | [GitHub](#) | [Live](#)

Jan 2026 – Mar 2026

- Structured a decoupled microservices backend via API Gateway and Load Balancers to route transactional order traffic.
- Implemented an event-driven tracking system using **AWS SNS/SQS** to deliver real-time order status updates to users.
- Optimized customer dispute handling by integrating **AWS S3 Multipart Uploads** for high-resolution complaint images.
- Engineered continuous integration and delivery pipelines via automated workflows to minimize multi-service friction.

ERP Artifact Automation System | *FastAPI, Next.js, Celery, Redis, PostgreSQL* | [GitHub](#) | [Live](#)

Oct 2025 – Nov 2025

- Built FastAPI backend with OData APIs and **OAuth 2.0** authentication to manage artifacts and system operations.
- Architected PostgreSQL schemas for scalable, reliable artifact storage and fast query performance.
- Leveraged Celery with Redis as the message broker to handle asynchronous background tasks.
- Integrated **CI/CD** pipelines using Jenkins, automating testing, deployment, and delivery processes.

Video Calling Application | *Next.js, FastAPI, Flask, WebRTC, WebSockets* | [GitHub](#)

Jun 2023 – Nov 2023

- Coordinated a real-time video calling platform using WebRTC for peer-to-peer media streaming.
- Built signaling with WebSockets and scalable message delivery via Redis and caching to reduce DB load.