Varun Shelke

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EDUCATION

University of Pittsburgh   Pittsburgh, PA
Master of Science in Information Science | GPA: 3.89   *Expected Apr 2026*

University of Pune   Pune, India
Bachelor of Engineering in Computer Engineering   *Aug. 2016 – Jul 2020*

EXPERIENCE

Backend Developer   May 2025 – Present
Pitt Cloud Innovation Center powered by AWS   *Pittsburgh, PA*

- **Led backend development** of an **AI-powered analytics platform** using **Python, AWS Bedrock, Lambda, and DynamoDB** to automate OCR + LLM processing of handwritten dive logs, **reducing data entry time by 10 hours/week** and enabling instant, structured performance insights.
- Architected a serverless, event-driven pipeline with **S3 triggers, API Gateway, and EventBridge** for fully automated data ingestion and analysis, **achieving 100% workflow automation** and eliminating manual intervention.
- Automated infrastructure provisioning using **AWS CDK**, reducing environment setup time by **50%** and ensuring consistent, reproducible deployments across multiple environments.

Engineer   May 2022 – Aug. 2024
Nagarro   *Pune, India*

- **Led** the enhancement of Java-based Fluent Order Management System by redesigning lead-time and fulfillment algorithms, which **reduced order cancellations by 85%**, **increased stock accessibility 10x**, and **cut delivery costs by 22%**.
- Developed **web services and API integrations** for **automated shipping process**, that **improved operational efficiency by 20% in freight costs** and achieved a **75% reduction** in production incidents through proactive bug resolution workflows.

Programmer Analyst   Nov. 2020 – May 2022
Cognizant Consulting   *Pune, India*

- **Designed and executed** a robust integration strategy between Salesforce CRM and SAP Commerce Cloud, by implementing **real-time data syncing** and optimized data models, which **improved cross department reporting accuracy** and enhanced database efficiency.
- **Automated** the product data import processes by integrating **automatic import triggers** to reduce manual errors and optimize workflows, achieving a **50% decrease in product data errors**.

PROJECTS

Diving Analytics Platform | GitHub   May 2025 – Aug. 2025

- Designed and deployed an **AI-powered diving analytics platform** using **Python, AWS CDK, and Bedrock for OCR and LLM-driven performance insights**. Built a serverless architecture with Lambda, DynamoDB, and S3 pipelines for real-time data ingestion and error-resilient processing. Delivered a secure React + Cognito frontend with API Gateway, implementing automation and best practices, currently **on path to production deployment**.

AI-Powered Clinical Notes Summarizer | GitHub   May 2018 – May 2020

- Built an AI-powered medical documentation assistant leveraging AWS Bedrock and Claude LLM to process clinical notes via OCR/NLP and generate patient-friendly summaries, improving accessibility of healthcare information. Designed a secure, modular Python application with credential management, prompt engineering, and Bedrock API integration

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, Typescript, SQL, GraphQL, Groovy, HTML, CSS, MySQL, Amazon Aurora, DynamoDB, MongoDB, Redis
Frameworks: Spring Boot, FastAPI, Node.js, React.js, SAP Commerce Cloud, Fluent Commerce
Cloud & Tools: AWS (CDK, Lambda, S3, Bedrock), Docker, Git, Jira, Postman.