VARUN SHELKE

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EDUCATION

UNIVERSITY OF PITTSBURGH Pittsburgh, PA
Master of Science in Information Science Expected Apr 2026
Concentration: Database and Web Systems.
GPA: 3.89

UNIVERSITY OF PUNE Pune, India
Bachelor of Engineering - Computer Aug 2016 - Oct 2020
GPA: 8.1 out of 10

SKILLS

- <u>Technical Skills</u>: Python, Java, JavaScript, SQL, GraphQL, Groovy, HTML, CSS, API Development and Integration, Object Oriented Programming, Data Structures and Algorithms.
- <u>Frameworks</u>: Spring Boot, FastAPI, Node.js, React,js, SAP Commerce Cloud, Fluent Commerce.
- <u>Tools & Cloud</u>: AWS (CDK, Lambda, S3, Bedrock), Docker, Git, Jira, Postman.
- <u>Databases</u>: MySQL, Amazon Aurora, DynamoDB, MongoDB, Redis.
- <u>Professional Skills:</u> Problem Solving, Consulting.

WORK EXPERIENCE

AWS CLOUD INNOVATION CENTER Pittsburgh, PA
Backend Developer May 2025 - Present

- **Developed** a **robust, serverless, AI enabled "diving analytics platform"** using **Python, AWS CDK, and OCR/LLM pipelines**, applying software engineering best practices to ensure **maintainability, scalability, and high availability** while supporting future product enhancements.
- **Implemented** an AI-powered OCR and large language model pipeline to automatically extract and structure handwritten dive log data into CSV format, **saving coaches an estimated 3 hours of manual data entry per day** and enabling near real-time performance analysis.
- **Collaborated** with a **cross-functional** team to deliver interactive dashboards and **automated workflows**, providing coaches with instant, actionable insights via mobile-friendly visualizations, improving athlete performance tracking and decision-making efficiency.

NAGARRO CONSULTING Pune, India
Engineer May 2022 – Aug 2024

- **Led** the enhancement of Fluent Order Management System by redesigning **lead-time and fulfillment algorithms**, implementing scalable solutions in production, which **reduced** order cancellations by **85%**, **increased stock accessibility 10x**, and **cut delivery costs by 22%**.
- **Automated** shipping processes by developing Cronjobs to integrate with **"Shippit"** and established proactive **bug-resolution workflows**, improving operational efficiency and reliability, resulting in **20% lower freight costs** and a **75% reduction in production incidents**.

COGNIZANT   Pune, India

Programmer Analyst   Nov 2020 – May 2022

- Designed and executed a robust integration strategy between Salesforce CRM and SAP Commerce Cloud, 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 hot folder functionality to reduce manual errors and optimize workflows, achieving a **50% decrease** in product data errors.

PROJECTS

Diving Analytics Platform | [GitHub](#)   May 2025 – Aug 2025

- **Developed** end-to-end **AI-powered** analytics platform using **Python, AWS CDK, and AWS Bedrock** to automate diving performance analysis, implementing serverless lambda functions for data processing, DynamoDB for scalable data storage and integrating **Claude 4.0 Sonnet LLM** for intelligent document extraction from training photos and competition scoresheets.
- Built robust **cloud-native data pipeline** with automated data ingestion using web scraping, real-time S3 event-driven processing, and **Bedrock Data Automation** for OCR/text extraction, demonstrating proficiency in large-scale data analytics, API development, and infrastructure-as-code practices with comprehensive error handling and retry mechanisms
- Architected scalable full-stack solution featuring React frontend with **Cognito authentication**, API Gateway REST endpoints, and automated **EventBridge scheduling** for weekly data updates, showcasing software development best practices including proper separation of concerns, security implementation, and deployment automation for production-ready applications

AI-Powered Clinical Notes Summarizer | [GitHub](#)   May 2025

- **Built** an **AI-powered** medical documentation assistant using **AWS Bedrock** and **Claude LLM**, processing clinical notes through OCR and natural language processing to generate patient-friendly summaries, reducing medical jargon comprehension barriers for non-expert users.
- **Architected** a secure, modular **Python** application with **AWS integration**, implementing credential management, **prompt engineering** templates, and Bedrock API interactions to deliver scalable healthcare communication solutions with enterprise-grade security practices

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