Dushyant Singh Pawar

Software Engineer | Backend • Cloud • Data

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Professional Experience

Software Engineer (Data & Analytics) *July 2025 – Present*
Rebecca Everlene Trust Company – Nonprofit *Chicago, IL*

- Engineering modular **ETL pipelines** in **Python + AWS Lambda** with logging, error handling, and retry strategies, reducing manual reporting time by **70%** and ensuring data accuracy across recurring workflows
- Developing **event-driven REST APIs and real-time dashboards** using **S3, DynamoDB, and CloudWatch**, enabling stakeholders to access analytics instantly and cutting reporting lag from hours to seconds

Graduate Research & Teaching Assistant *Jan. 2024 – May 2025*
University of North Carolina at Charlotte *Charlotte, NC*

- **SupportAI Research:** Designed and deployed a **LangChain-powered RAG system** with **HyDE-based query expansion** and adaptive caching on **AWS**, improving classification accuracy from **70% to 90%** under concurrent loads
- Mentored **90+ graduate students** in Intelligent Robotics and Data Mining, providing guidance on **ML algorithms, distributed systems, and real-time pipelines**, which improved project success rates

Software Developer *Mar. 2022 – Apr. 2023*
EdvanceSkill for Actuaries – Professional Education Platform *Bengaluru, India*

- Optimized **RESTful APIs** with **FastAPI + PostgreSQL (AWS RDS)** by implementing query indexing and **Redis caching**, reducing latency by **40%** for **120+ concurrent users**
- Architected **serverless microservices** on **AWS Lambda** with **JWT/OAuth2 + RBAC**, enabling secure scalability and reducing infra costs by **25%**
- Automated **CI/CD pipelines** (GitHub Actions, Docker, Terraform) with integrated **unit/integration tests (PyTest)**, achieving **99.9% uptime** and cutting deployment cycles by **30%**
- Conducted **load testing with JMeter** and introduced caching + retry logic, boosting system reliability by **35%**

Assistant System Engineer *Nov. 2020 – Feb. 2022*
Tata Consultancy Services – Fortune Global 500 IT Consulting *Pune, India*

- Engineered and optimized **Oracle SQL** pipelines monitoring **1M+** assets, enabling predictive maintenance and reducing unplanned downtime by **15%**.
- Built and optimized **backend APIs + integration workflows** (REST APIs + batch jobs) to ensure seamless data flow across **5+ enterprise systems**, enhancing interoperability for global clients
- Validated **AWS S3 + Lambda migration workflows** with monitoring and rollback strategies, cutting migration error rates by **25%**
- Collaborated in an **Agile/Scrum environment** with cross-functional teams to deliver scalable solutions supporting **1M+ assets** across BASF-Nunhems' global sites

Technical Skills

Languages: Python, Java, C++, JavaScript/TypeScript, SQL, Bash
Backend/Architecture: REST APIs, FastAPI, Spring Boot, Microservices, Event-Driven Systems, Serverless
Cloud Platforms: AWS (EC2, S3, RDS, DynamoDB, Lambda, CloudWatch, API Gateway, IAM, VPC, CloudFormation), Azure, GCP, Docker, Kubernetes, Terraform
Data/DevOps: PostgreSQL, MySQL, MongoDB, Redis, Snowflake, Kafka, ETL Pipelines, CI/CD (GitHub Actions, Jenkins), Linux, Agile/Scrum, TDD (PyTest, JUnit), Monitoring (Prometheus, Grafana, ELK)

Projects

- **AWS Serverless Pipeline:** Designing an event-driven file ingestion system with *Lambda, S3, DynamoDB*, integrating retry logic and DLQs to process files in under 3s at a cost of less than $1/month
- **EngageTrack Analytics:** Built a real-time learning analytics dashboard (*Flask, React, PostgreSQL*) with 92% accuracy and sub-200ms query latency, enabling smooth insights for 100+ simulated users
- **ChartMind AI:** Developed a lightweight chart interpretation service (*Python, OpenCV, Docker*) reaching 85% accuracy on 500+ test samples, reducing manual analysis time by 60%

Education

University of North Carolina at Charlotte *Aug. 2023 – May 2025*
Master of Science in Computer Science | GPA: 3.90 / 4.00 *Charlotte, NC*

Medi-Caps University *Aug. 2016 – Aug. 2020*
Bachelor of Technology in Computer Science Engineering *Indore, India*