

NIDHI SHARMA

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SUMMARY

Software Engineer with 3+ years of experience building full-stack web applications and backend services in enterprise and research environments. Strong focus on backend systems, APIs, and data-driven applications using Python, React, SQL, and cloud platforms. Proven impact improving system reliability, reducing production issues by 40%, and improving data accuracy by 25%.

EDUCATION

Virginia Polytechnic Institute and State University

Master of Engineering, Computer Science | GPA: 3.9 / 4

Relevant Coursework: Web Application Development, Machine Learning, AI Tools for Software Engineering, Information Security, Blockchain Technologies, Social Media Analytics.

Virginia, United States

August 2024 - December 2025

TECHNICAL SKILLS

Languages & Frameworks: Python, JavaScript, TypeScript, Java, React, React Native, Next.js, FastAPI.

Web & APIs: RESTful APIs, GraphQL, Backend Services, API Design, Client-Server Architecture.

Databases & Data Systems: PostgreSQL, MySQL, MongoDB, Firebase, Redis, Apache Kafka, Apache Airflow, Elasticsearch.

Cloud & DevOps: AWS, GCP, Azure, Docker, Kubernetes, CI/CD, Cloud Functions, Cloud Run.

Testing, Tools & Practices: Pytest, Git, Jira, Agile/Scrum, Debugging, System Design, Distributed Systems.

WORK EXPERIENCE

Virginia Polytechnic Institute and State University | Graduate Teaching Assistant

August 2025 - December 2025

- Guided 45+ graduate students in designing and debugging distributed data pipelines using AWS, Airflow, SQL, and Python.
- Strengthened backend workflows by adding schema validation, retries, failure recovery, and reproducibility aligned with production systems.
- Supported ML model integration with REST APIs and standardised pipeline documentation to improve maintainability.

A12XT Inc | R&D Machine Learning Intern

May 2025 - August 2025

- Engineered backend services and Python-based data workflows supporting time-series forecasting pipelines in a research production environment.
- Designed and exposed 5+ FastAPI endpoints, enabling model execution, data retrieval, and inter-service integration with clearly defined API contracts.
- Collaborated with cross-functional stakeholders to align data formats, backend behaviour, and integration expectations across systems.

Accenture Services | Data Engineering Analyst

July 2021 - July 2024

- Maintained and enhanced enterprise-scale payroll and reporting platforms, backed by Workday-integrated backend services.
- Resolved production data and application issues using SQL analysis, logs, and pipeline debugging across 10+ workflows.
- Improved reporting accuracy by 25% through query optimisation, validation enhancements, and controlled Agile execution.
- Contributed to sprint planning, automated testing, documentation, and peer code reviews, supporting reliable releases in a high-stakes production environment.

PROJECTS

Bookstore Web Application | React, Python, JavaScript, HTML, CSS

- Designed a full-stack web application with a React frontend and Python backend, supporting search, filtering, and browsing workflows across 3+ user scenarios.
- Built responsive UI components with client-side state management and backend API integration, enabling end-to-end request handling across 10+ API endpoints.
- Validated system behavior by testing and debugging 10+ API endpoints and UI flows, improving feature stability and correctness.

IDEATE: AI-Powered Courseware Generator | React, Python, Flask/Cloud Functions, Firestore, Vertex AI, GCS, Cloud Run

- Architected backend APIs and asynchronous workflows to support multi-stage AI job execution across 5+ functional pipelines.
- Operationalized long-running processes by adding validation, retries, and execution status tracking, improving job reliability and failure recovery.
- Integrated frontend and backend components across 5+ UI panels, supporting end-to-end user workflows from submission to result delivery.

Ducky: AI-Powered Coding Suite & Quack MCP Extensions | Python, FastAPI, Streamlit, OpenAI, MCP, Pytest, Docker

- Built internal developer tooling to streamline debugging and testing across multiple iterative development cycles.
- Automated 15+ test cases, improving test consistency and reducing manual verification during development.
- Enhanced developer feedback loops by surfacing structured test results in real time, accelerating issue identification.

PROFESSIONAL CERTIFICATIONS

- Google Cloud Certified:** Cloud Digital Leader, Professional Data Engineer, Associate Cloud Engineer
- Microsoft Certified:** Azure Fundamentals