

# SIDDHARTHA NAGULA

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## PROFESSIONAL SUMMARY

Software Engineer and AI Cloud Specialist with 4+ years building scalable, cloud-native applications and intelligent AI solutions for enterprises. Skilled in Python, Java, SQL, micro-services, RESTful APIs, and distributed systems on AWS, GCP, and Azure. Delivered end-to-end solutions from ETL pipelines to production LLMs using Agile/Scrum practices, backed by data-driven decision making and rigorous validation guardrails for data quality. Known for a dive-deep, learn-by-doing mindset, relentless continuous improvement, and a culture of operational excellence, ownership & accountability, and customer obsession across cross-functional teams.

## EDUCATION

University of Texas at Arlington | *Master of Science, Computer Science*

Aug 2023 - May 2025

## TECHNICAL SKILLS

- **Languages & Frameworks:** Python, Java, C#, C++, Shell, Flask, Django, FastAPI, TypeScript, JavaScript, PHP, Perl, HTML, CSS
- **AI & Data Science:** LLMs, LangChain, Hugging Face, LlamaIndex, Diffusion Models, Transformers, OpenCV, NLP, FAISS, PyTorch, TensorFlow, Keras, GANs, Scikit-learn, Feature Engineering, Deep Learning, Model Tuning, n8n, MCP, AI Workflows
- **Data Visualization:** Power BI, Tableau, Excel, Git, Dataflow, EC2, Redshift, PPT, Dashboards, Charts, Tables, Pivot, Looker
- **Cloud:** GCP, Compute, IAM, BigQuery, Vertex AI, Kubernetes, Storage, AWS, SageMaker, EC2, S3, Azure, Serverless, Firebase
- **DevOps & MLOps:** Docker, Terraform, MLflow, Data Pipelines, Weights & Biases, DVC, Airflow, CI/CD, Prompt Engineering
- **Big Data & Databases:** Spark, Hadoop, Pandas, NumPy, Databricks, Snowflake, Kafka, MongoDB, MySQL, PostgreSQL, SQLite
- **Foundations:** Object-Oriented Design, Design Patterns, Algorithms, Data Structures, Relational Databases, Log Analysis

## WORK EXPERIENCE

Compass Group USA | *Supervisor*

Jan 2024 - May 2025

- Improved shift productivity by 20% by managing a 7-person team and implementing standardized communication protocols.
- Automated daily logs and reports with Python and Excel macros, reducing reporting time by 15% and increasing data accuracy.
- Engineered interactive Business Intelligence (BI) dashboards for real-time tracking, leading to a 15% reduction in inventory stockouts.
- Analyzed transaction and customer flow data in SQL/Python, optimizing staffing and improving peak-hour throughput by 12%.
- Built predictive models forecasting customer footfall, boosting staffing efficiency and increasing service capacity by 10%.

Black Iron Fitness Studio | *Technical Operations Lead & Consultant*

Sep 2020 - Jul 2023

- Enhanced email campaign analytics, achieving a 30% improvement in user engagement and response rates.
- Conducted churn analysis that improved customer retention rates by 22% through targeted interventions and predictive analytics.
- Improved payment accuracy by 30% by deploying a CRM that reduced manual entry by 20% and minimized delayed renewals by 10%.
- Led analytics initiatives delivering segmentation models, resulting in 47% customer growth and a \$200K annual revenue increase.
- Boosted customer retention by 22% through marketing performance analysis and behavior-based improvements.

Personify | *AI & Data Science Intern*

Apr 2022 - Sep 2022

- Optimized chatbot response time by 12% by developing an NLP bot with Azure Cognitive Services and FastAPI.
- Improved training efficiency by 5% through preprocessing and visualizing 1,000+ records using Pandas and Matplotlib.
- Enhanced model accuracy by 8% and reduced false positives by 6% by fine-tuning text classifiers in TensorFlow using Python.
- Implemented a real-time model-monitoring pipeline (Prometheus + custom data-drift detectors) that surfaced 100% of chatbot inputs out-of-distribution, cutting root-cause debugging time by 30% for the NLP service.

## PROJECTS

Complete AI-Driven Health Platform (Web & Mobile) | [Live Demo](#)

- Building a full-stack AI health-tracking platform featuring voice-command logging, multilingual support, personalized health scoring, nutrition and fitness tracking, real-time analytics, medication reminders, and weekly AI-generated video summaries.
- Tech Stack: React, TypeScript, Supabase, ElevenLabs, Stripe, Tailwind CSS, Framer Motion, Vite, i18next

AI Document Assistant - Cloud & AI-Powered Chatbot | [GitHub](#)

- Built an AI chatbot that extracts cited answers from documents, enabling instant insights from PDFs, DOCX, and TXT files.
- Tech Stack: FastAPI, LangChain, FAISS, Hugging Face Transformers, React, Streamlit, Docker, Terraform, Pinecone, AWS, GCP

AdsEarn - Android Analytics App | [Research Publication](#)

- Led a two-person UI/UX team to design a user-centric interface, increasing satisfaction scores by 10% during beta testing.
- Improved backend performance by 8% and reduced downtime by 12% by developing a Firebase-powered mobile app for targeted ad tracking and campaign analytics.
- Tech Stack: Java, Android SDK, Firebase, Firestore, Google Analytics, REST APIs, XML, Gradle, UI/UX Design

## **NetWorked -Open Source CLI Security Toolkit | [GitHub](#)**

- Facilitated educational learning and open-source contributions with over 100+ GitHub views and comprehensive project documentation.
- Automated vulnerability assessment and reconnaissance tasks by developing a Python toolkit with 10+ modular scripts, including Apache scans, CVE lookups, and OWASP Top 10 testing.
- Tech Stack: Python, Bash, Requests, BeautifulSoup, Nmap, CVE Search, OWASP Zap, Apache Benchmark, Regex, CLI, Git

## **Service Request System (SRS) - Android App | [GitHub](#)**

- Developed six core modules, including authentication, booking, and review systems, and implemented Agile Scrum practices to improve sprint delivery by 25%.
- Collaborated with cross-functional teams to deliver data-driven solutions in an agile environment, driving business growth and customer satisfaction.
- Tech Stack: Java, Android SDK, Firebase, XML (UI Design), Google Authentication, Agile Scrum, REST APIs, Git

## **Donation Web Application | [GitHub](#)**

- Ensured 99% uptime by building a secure, real-time web donation platform using Django and SQLite.
- Created a dynamic analytics dashboard to monitor transactions, identify anomalies, and support predictive donor behavior modeling.
- Tech Stack: Python, Django, SQLite, JavaScript, HTML, CSS, Chart.js, Bootstrap, REST APIs, Security

## **CERTIFICATIONS**

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- **Building LLM Applications With Prompt Engineering:** NVIDIA: Certificate of Competency  
Skills & Tools: Prompt Engineering, Large Language Models (LLMs), LangChain, NVIDIA NeMo, Llama-3.1, Generative AI, Retrieval-Augmented Generation (RAG), P-tuning, Model Performance Tuning, Experimentation & Evaluation, Data Analysis & Visualization for LLM workflows, Python, API Integration & Model Deployment.
- **AI Masterclass Using Python:** Pantech Solutions: Certificate of Completion  
Skills & Tools: Python, DialogFlow, OpenCV, TensorFlow, Keras, NLTK, Jupyter Notebook, Google Cloud APIs, OpenALPR Cloud, Imagga Cloud, Raspberry Pi, Machine Learning (supervised, unsupervised, reinforcement), Computer Vision (object detection, face/gesture/emotion recognition, OCR), Deep Learning (CNNs, RNNs), NLP (text classification, sentiment analysis, title generation, speech emotion analysis), API Integration, Data Preprocessing, Data Annotation, Deployment, Automation.
- **Google Certified Associate Cloud Engineer:** Google Cloud: Diamond League with 75+ Badges  
Skills & Tools: Compute Engine, Cloud Run, App Engine, Cloud Storage, BigQuery, VPC, IAM, Cloud Functions, Cloud Build, Pub/Sub, Cloud Monitoring, Cloud Logging, Cloud Shell, Cloud Source Repositories, CI/CD, Kubernetes Engine, Automation.
- **Ethical Hacking & Penetration Testing:** Udemy: Certificate of Completion  
Skills & Tools: Kali Linux, Metasploit, Wireshark, SQLmap, Nmap, Aircrack-ng, BeEF, OWASP Zap, social engineering, network attacks (MITM, ARP/DNS spoofing), web vulnerabilities (SQLi, XSS, file inclusion).

## **ACHIEVEMENTS**

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- **Google Cloud Skills Boost Diamond League Cloud Architect** | Attained Diamond League status with 37,500+ points and 100+ skill badges on Google Cloud Skills Boost, showcasing expert-level proficiency rooted in completing the entire Google Cloud Generative AI curriculum. This demonstrates mastery across generative AI, multi-cloud architecture (GCP, AWS), data engineering, and DevOps, with hands-on expertise from foundational LLMs and transformer models to advanced techniques like prompt engineering, multimodal RAG, and end-to-end AI model deployment. Expertise is validated through extensive labs in Google Kubernetes Engine (GKE), infrastructure automation with Terraform, analytics with BigQuery, and a commitment to Responsible AI best practices, ranking among the top-tier professionals in the global Google Cloud learning community.
- **Excellence in Operations and Leadership Training** | Completed foundational and advanced operations training, mastered digital operational processes, and achieved top ranking in all available digital learning modules for store operations and leadership. Recognized for excellence in both customer service and team management through successful completion of leadership, operations, and quality service certifications.
- **LeetCode Hard Problem-Solving Champion** | Solved 250+ hard challenges, showcasing mastery of data structures, algorithms, and design patterns while optimizing distributed-computing scenarios, coding standards, object-oriented design, design patterns.

## **PUBLICATIONS**

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- Android Application for Online Advertising of Products and Services.