

APURVA BANKA

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ABOUT ME

Computer Science Master's student at University at Buffalo with 4+ years of experience in automation, data systems, and AI-driven solutions. Strong experience in building cloud-native, scalable, and secure infrastructure solutions, with deep DevOps, monitoring, and automation expertise.

EDUCATION

Master of Science in Computer Science	[CGPA – 3.83/4]	University at Buffalo, NY [Aug 2024 - Dec 2025]
Bachelor of Technology in Computer Science	[CGPA - 8.31/10]	PES University, IN [Aug 2016 - July 2020]

SKILLS

- **Programming Languages** : Python , C++ , Java , SQL , JavaScript , Typescript , HTML , CSS , GoLang
- **AI**: LLMs, Prompt Engineering, LangChain, LangGraph, LangSmith, Vector Embeddings
- **ML** : Time-series Forecasting, Jupyter, Matplotlib, Pandas
- **Cloud/DevOps** : AWS, Azure, GCP, Docker, Kubernetes(AKS), Prometheus, Grafana, Jenkins, Spark
- **Data Systems** : Kafka , PostgreSQL , DynamoDB , Redis , Chroma DB , Spark, ElasticSearch, Firestore, Snowflake
- **Frameworks** : Spring Boot, FastAPI, Flask, Streamlit, .NET, Node JS, Flutter, React JS, Hibernate, Pandas Profiling
- **Tools / OS** : Git , Jira , Slack, Sonar , Kibana , LINUX/UNIX, Ansible, Terraform, ETL, EMR, Pydantic, LLMs
- **Relevant Coursework** : Object-Oriented design (OOPs) , Data Structures & Algorithms , Databases (DBMS), Reinforcement Learning, Web Development, Data Intensive Computing, Artificial Intelligence

WORK EXPERIENCE

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|---|-----------------------------|
| Full-Stack Developer Intern Humanity Founders San Francisco, CA | May 2025 – Present |
| <ul style="list-style-type: none">• LLM Automation: Built an LLM-driven outreach engine with GPT-4o, reduced manual workload by 80% through intelligent communication automation while boosting actionable insights.• Project Ownership: Led backend development for <i>Willow</i>, a real-time platform supporting mission-critical workflows for social ventures.• Architecture & Engineering: Designed scalable APIs and relational schemas using Django and PostgreSQL, ensuring reliability and maintainability.• Client Collaboration: Worked directly with the client to translate evolving business needs into technical features and product decisions. | |
| Senior Software Engineer Optum, UHG Bengaluru, IN | Jan 2023 – July 2024 |
| <ul style="list-style-type: none">• Pipeline Automation : Spearheaded an innovative automated framework leveraging AWS Lambda, integrated with SQS & SNS implemented using Terraform, containerization using AWS slashing manual intervention by over 70%.• ETL Performance Optimization : Engineered an indexing strategy for Parquet file queries, reducing latency by 60% and boosting ETL throughput by 45% maintaining the compliances and security monitorings.• Data Consolidation : : Crafted a high-performance, distributed data pipeline to aggregate 130M+ records, leveraging advanced ETL, real-time analytics, and accelerated data modeling to drive faster, data-driven decisions.• Cost Efficient: Revolutionized cluster management by deploying a serverless EMR solution replacing manual provisioning with elastic scaling, cutting costs by 40% and boosting operational agility. | |
| Software Engineer Optum, UHG Bengaluru, IN | Aug 2020 – Dec 2022 |
| <ul style="list-style-type: none">• Growth & Retention : Architected a Snowflake based data platform to boost tenant onboarding by 80% and retention to 90%, driving revenue growth through seamless integrations and data-driven insights.• Cost Intelligence Predictive Analytics: Designed a real-time cost estimation dashboard leveraging ETL pipelines, data warehousing, and OLAP processing, reducing cost variability and enhancing financial forecasting accuracy by 90%.• Leadership & Cross-Functional Collaboration : Conducted code/design reviews to uphold quality standards. Resolved 100+ critical customer escalations via root-cause analysis. Mentored 4+ new hires on tools and workflows. Owned end-to-end delivery of customer requested software enhancements, fostering teamwork across various teams.• Rostering Application : Created a Spring Boot rostering application with SOLID design, achieving 99.9% peak traffic uptime, enhanced query performance ~ 40% through indexing, and rigorous load testing with JMeter and JProfiler. | |
| Software Developer Intern Shadowfax Technologies | Jan 2020 – Aug 2020 |
| <ul style="list-style-type: none">• Scalable Bulk Upload: Deployed an asynchronous bulk upload system with Celery, cutting CSV processing time by 60% while preventing web freezes. Optimized concurrency for seamless handling of 10GB+ files.• Process Automation : Coded a Python log analyzer (30% faster error detection) that improved error detection speed by 30%, identifying issues missed by Sonar and enhancing debugging efficiency. | |

PROJECTS

Therapy AI-Mental Wellness Chatbot [\[Link\]](#)

May 2025

- Implemented a real-time voice AI mental health companion using **Mistral 7B LLM**, **fine-tuned** with **LoRA** for empathetic response, using **Google TTS** for voice generation and integrated with **RAG** for personalized therapeutic support.

Willow [\[Link\]](#)

April 2025

- Built an **LLM-powered multi-agent** outreach system using **GPT-4o** + **Twilio APIs** for scalable communication automation. Integrated API and database workflows to reduce **manual effort by 80%** and enhance insight generation.

InsightQuery [\[Link\]](#)

Jan 2025

- Developed an Python based **LLM-first analytics tool** using LLaMA and Streamlit that auto-generates **context-aware visualizations** and data narratives via intent-aware prompts, using **vector embeddings** reducing **analysis time by 70%** and achieving 4.8/5 usability from 50+ users.

Forecaster [\[Link\]](#)

Nov 2024

- AI-driven time-series platform with causal-temporal modeling and **adaptive recommendation engines** predicts restaurant SKU demand (weather/order patterns), cutting **stock outs by 50%** and **waste by 40%** while enabling hyper-personalized interactive menus.

ACHIEVEMENTS & AWARDS

- Publication** : Published a paper on Bike Count Sharing Prediction Using Machine Learning in Ijaresm. [\[Publication Link\]](#)
- Hackathon Winner**: Won the Humanity Founders Hackathon with an AI-driven outreach tool, performance led directly to a Full Stack Developer Internship offer.
- Excellence Award** : Won a performance excellence award for Top Performer of the quarter worth \$500.