# Saketh Annimalla

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## EDUCATION

**The University of Texas at Dallas**, Richardson, TX · **May 2025**
*Master of Science, Computer Science* · *GPA 4.00/4*
Data structures & algorithms, Database design, Statistics for data science, Machine learning, NLP, Big data management

**Indian Institute of Technology Hyderabad** · **May 2021**
*Bachelor of Technology, Civil Engineering* · *GPA 8.17/10*

## TECHNICAL SKILLS

- ***Programming Languages***: Python, Java, JavaScript, TypeScript, C++, C
- ***Frameworks***: FastAPI, Flask, Django, NestJS, ExpressJS, Node JS, NextJS, ReactJS, Spring Boot, selenium
- ***Databases***: MySQL, PostgreSQL, MongoDB, Redis cache
- ***Technologies***: Kafka, Kubernetes, Docker, Jenkins, gRPC, WebSocket, Prometheus, Grafana Loki, Ansible, AWS S3, SageMaker, RDS, Lambda, EKS, EC2, JWT, OAuth 2.0, Git, MS Office Suite, Jira, TailwindCSS, Hadoop, PySpark

## PROFESSIONAL EXPERIENCE

**BeeHyv Software Solutions**, Dallas · **May 2024 – Present**
*Software Developer Intern*
- Developed the cloud controller and storage layers of a robust data pipeline using **FastAPI**, **Kafka**, **gRPC** and Time series PostgreSQL for cloud-based IC evaluation, processing real time data from remote labs providing accelerated IC adoption.
- Transitioned inter service communication from **WebSockets** to **gRPC** following rigorous benchmark study achieving a 60% improvement in latency and throughput.
- Created **ReactJS** components using **TypeScript** to display real time data visualization of IC evaluation results via WebSockets, utilizing compressed binary data reducing refresh latency by 2 times.
- Managed deployments, services, and configuration of data pipelines by developing **Kubernetes manifests** and **Helm charts**. Automated deployment processes for Kubernetes clusters using CI/CD pipelines with **Jenkins** on Amazon EKS.

**University of Texas at Dallas** , Richardson · **December 2023 – April 2024**
*CS Outreach Instructor*
- Conducted hands on **Java** programming workshops to high school students with class sizes averaging 15 students to reinforce understanding of **object oriented programming principles** and problem solving techniques.

**BeeHyv Software Solutions**, Hyderabad · **July 2022 – July 2023**
*Software Developer*
- Built the ingestion module utilizing FastAPI to import large volumes of raw data in various formats from ERP systems and perform data preprocessing, making the data suitable for training models. Achieved a remarkable 95% reduction in processing time by implementing asynchronous batch insertions.
- Implemented **XGBoost** and **ARIMA** models to predict sales & operations metrics using AWS SageMaker, finding optimal sets of hyper-parameters, achieving significant improvement in performance metrics.
- Defined and implemented data models using **SQLAlchemy** as ORM and Alembic for migrations, tailoring schemas for demand supply forecasting, inventory metrics, and analytics along with managing **PostgreSQL** on AWS RDS.

**New Age IT**, Mumbai · **September 2021 – June 2022**
*Automation Engineer*
- Significantly improved workflow efficiency by configuring and managing **Jenkins pipelines** streamlining the software testing workflow through automation.
- Achieved software reliability by developing comprehensive set of **Python test scripts**, rigorously validating various functionalities, including multi-source integrations and scalability, achieving software robustness.
- Developed **SQL** query suites, assessing operator performance, memory utilization, and spillage occurrences, thus evaluating the software's efficiency.

## PROJECTS

- e-commerce - Developed a scalable e-commerce platform using a microservices architecture and **event-driven design** with Apache Kafka for inter-service communication. Utilized **Next.js**, **Nest.js**, PostgreSQL for Orders, **MongoDB** for Products, and Stripe API, with secure **OAuth 2.0** based authentication. Integrated Kong API Gateway, containerized with Docker and orchestrated on Kubernetes. Built a CI/CD pipeline using Jenkins and GitHub, with infrastructure automated by **Ansible** and monitoring setup with **Prometheus** and **Grafana**.

- newsAPI-ELK - Built a real-time data pipeline using Kafka and PySpark Structured Streaming to process news data from NewsAPI, implemented Named Entity Recognition using NLTK , and visualized results with the ELK stack (Elasticsearch, Logstash, Kibana) for dynamic insights.

- Developed an Organic farming management system using **Django** for RestAPIs and ReactJS for intuitive UI, effectively processing field images using OpenCV, generating plans for a crop cycle and managing users based on their roles.