



Uday Chandra Bhookya

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 uday-chandra

 udaybhokya



EXPERIENCE

Digitate - Tata Research

Data Scientist

AUG 2022 – PRESENT.

PUNE, INDIA

- **Designed and implemented AI-driven algorithms** for Ignios CloudOps, utilizing anomaly detection, clustering (K-Means, KNN), forecasting models (ARIMA, LSTM), and statistical recommendation engines, achieving 30–40% annual cloud expenditure reduction. Innovations resulted in a research publication and multiple patent filings.
- **Engineered GenAI-powered agents using LangGraph**, automating IT operations through intelligent issue identification, human-in-the-loop validation, and auto-generated tailored code fixes. Integrated advanced pattern recognition to identify spatial and behavioral similarities in operational data, significantly reducing manual interventions.
- **Developed a multilingual Generative AI Document Assistant**, automating product documentation enhancements to significantly improve global accessibility and customer engagement.
- **Built PoC AI features for Ignios CloudOps**, including Retrieval-Augmented Generation (RAG)-based Document and Table Q&A systems, complemented by statistical recommendation engines that deliver concise, impactful insights tailored for rapid consumption (e.g., short-form insights shorts).
- **Architected a comprehensive data storytelling platform**, integrating a two-tower model and advanced graph algorithms to automatically generate coherent narratives from over 15,000 analytical insights, accelerating insight discovery by 90%. Developed executive dashboards incorporating statistical analyses (change, trend, and impact analyses) to inform strategic decisions, resulting in two published research papers and patent filings.
- **Developed and optimized a TF-IDF text classification model**, achieving 85%+ accuracy in categorizing extensive textual datasets, significantly streamlining text analytics workflows.
- **Enhanced decision-tree algorithms** to derive deeper, more refined classification rules, contributing to a published research paper on optimized decision-making systems.
- **Mentored junior data scientists** in statistical analysis and machine learning, elevating team productivity and technical capabilities.

LEO1

Full Stack Developer Intern

MAY 2021 – JUL 2021

HYDERABAD, INDIA

- Improved product **UX** and built **coupon discount management** backend utility.
- **Enhanced** key product pages across the platform to improve usability and engagement.

SUMMARY

Data Scientist & ML Engineer with **3 years** of experience designing and developing scalable AI solutions, leading projects from concept to production, and advancing innovation through patents and research publications.

EDUCATION

Indian Institute of Information Technology, Tiruchirapalli

B.Tech in Computer Science

AUG 2018 – MAY22

and Engineering

TECHNICAL SKILLS

ML/DL	Recommendation Systems, Statistical/Time Series Analytics, Classification, Regression, GNNs, CNNs, LSTM, ARIMA, XGBoost, Predictive modeling, Anomaly detection, hypothesis testing, Pandas, NumPy, TensorFlow, PyTorch, Sk-learn
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Gen AI	LLMs, Prompt Engineering, RAG, LangChain, LangGraph, Agentic AI
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Languages Python, Java, C, JavaScript

Big Data PySpark, GCP(Basics), Azure(Basics)

DB & Web MySQL, PostgreSQL, Django, Flask, ReactJs

PUBLICATIONS

- **U. C. Bhookya**, K. Jethuri, S. R. Ravuru, and M. Natu, "**Addressing Spend Leakage and Optimization of Cloud Costs**", IEEE International Conference on Big Data (Big Data), 2024, Washington DC, USA. [Link]
- S. N. Samudrala, **U. C. Bhookya**, and M. Natu, "**Mining patterns for proactive management of procure-to-pay exceptions**," 2024 IEEE International Conference on Data Mining Workshops (ICDMW), 2024, Abu Dubai. [Link]
- S. Saluja, R. Babu, **U. C. Bhookya** and M. Natu, "**Addressing Insight Fatigue with Insight Summarization**" International Communication Systems and Networks and Workshops, COMSNETS, 2025
- R. Babu, **U. C. Bhookya**, S. Saluja, and M. Natu, "**Addressing AIOps Data Fatigue with Insight Chains**" European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, ECML, 2025 [Under review]
- **Digitate Blog**: Statistical Significance Testing. [Link]

PATENTS

- **U.C. Bhookya, K. Jethuri, S. R. Ravuru, and M. Natu. Methods and systems to optimize cloud cost by analyzing resource usage.** Patent application no. (202421066668 / 202421066667 / 202421066669) (patent pending).
- **R. Babu, U.C. Bhookya, M. Natu. Data driven insight generation and creation of contextually consistent chains thereof.** Patent Application No. 202421093804 (Patent pending).