



Kalicharan Mahasivabhattu

Associate Director Datascience with 20+ years of experience in Healthcare and Manufacturing, leading large-scale data science operations in complex environments. Proven track record of delivering innovative and impactful solutions using machine learning (ML), artificial intelligence (AI), and natural language processing (NLP) to improve quality, costs, and safety.

Expertise in Python, C++, analytics, data science, web applications, and complex data processing. Strong analytical, communication, and presentation skills.

Author of "Algorithm Diaries," a book on the applications of ML and AI in the for general audience.

Experience

Mar 2020-Present

Associate Director | Novartis | Healthcare

As an Associate Director of Data Science, I led the end-to-end delivery of a cutting-edge medical imaging platform, harnessing the power of data science and analytics within an Agile Scrum framework. Collaborating closely with a multifaceted team of engineers, data scientists, and analysts, I spearheaded the following projects followed by responsibilities:

- **Projects**
 - **Conversational AI:** - A conversational AI developed with the power of OpenAI custom models by using 500+ custom documents of Healthcare research papers on Molecules to find the relevant experiment conducted.
 - **Generative Reporting:** Leading the development of Generative AI based submission reports using Azure OpenAI. Built successful POCs using Semantic Kernel using RAG framework.
 - **Medical Language Embedding:** Lead the development of storage and retrieval of Medical Images and their descriptions using Machine learning based embedding. This helped in finding similar images, incorrect classifications etc based on the description of the images.
 - **Medical Image Nodule Detection:** Worked in collaboration with IIT Mumbai to develop a I.P for nodule detection of lung x-ray images.
- **Cross-Functional Team Leadership:** I fostered a collaborative environment, leading cross-functional teams composed of engineers, data scientists, and analysts to achieve on-time and within-budget delivery of the platform. Managed team of 12+ members both internal and external resources.
- **Stakeholder Engagement:** Throughout the project lifecycle, I engaged proactively with stakeholders, maintaining clear and transparent communication channels to provide updates and address concerns.
- **Risk Management:** I proactively identified potential risks and vulnerabilities, implementing effective mitigation strategies to safeguard project success and minimize disruptions.
- **Quality Assurance:** Ensuring the highest standards of quality, I implemented rigorous quality assurance practices to guarantee the reliability and precision of the medical imaging platform.
- **Data-Driven Improvement:** I championed a data-centric approach, gathering and analyzing data insights to drive continuous improvements in the platform's

Location
Hyderabad

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LinkedIn

Cloud, DevOps
AWS, Azure, IAC
Docker, Kubernetes
Automation
Scripting
Microservices
Architecture
CI/CD Pipelines

Project Management, Agile
Agile, Scrum
JIRA, GitHub
Stakeholder
Management
Risk Management
Resource
Management

Coding, Open Source

- Python
- Seaborn
- TensorFlow
- Keras

- Pytorch
- Scikit-Learn

Publications
Engineering Data
Management using AI.
<https://search.spe.org/i2kweb/SPE/doc/onepetro:15CA80EA>

Podcast
Listen to my Podcast.
"Talking AWS for Data
science"

Author of "Algorithm
Diaries"

My [interview](#) about machine
learning published in the
Offshore Engineer magazine

Winner of 50000 USD
Innovation Funding

~8000 followers on
LinkedIn

functionality and performance.

Aug 2016-Feb 2020

Global Datascience Manager | Worley | Engineering Data Management

As a Global Data Science Manager, I have led and overseen a diverse range of innovative projects spanning computer vision and deep learning. These initiatives have leveraged cutting-edge technologies and machine learning frameworks to deliver transformative solutions. Here's a summary of the key accomplishments and areas of expertise:

- Deep learning
 - Chatbots: Built various chatbots using DialogFlow architecture.
 - Design and Architecture of Automatic Document classification of PDF drawings using Pytorch and Keras. Flask, NLP, Word2Vec, HTML
 - Design and development of processing video footage onsite to analyze if the workers are wearing required PPE (Helmets, Vests, Glasses) using OpenCV and Keras CNNs. Did a POC on connecting to AWS Kinesis.
 - Processing video footage to recognize classify an unsafe scenario.
 - Image classification of wildlife photos and identifying endangered species using Yolo 9k.
 - Converting a hand drawn sketch into an AutoCAD drawing using Pytorch. Image labelling, Training etc.

May 2012-July 2016

Associate Manager | Accenture | Shell Data Integration

- Data Strategy and Management: I played a pivotal role in designing and implementing a robust data strategy. This included ensuring data consistency across multiple disciplines, thereby enhancing data quality and integrity.
- Engineering Deliverables Management: I managed multiple Engineering, Procurement, and Construction (EPC) companies during both the Front-End Engineering Design (FEED) and Detail Design phases. This involved overseeing the production of engineering deliverables to meet project requirements.
- Data Mapping Specialist: My expertise extended to data mapping operations within integration scenarios, ensuring seamless data flow and interoperability across different systems and platforms.
- Hypercare Specialist: I served as a Hypercare Specialist for Shell, providing essential support to EPCs during their onboarding to the Project Vantage solution. This assistance was instrumental in facilitating a smooth transition and optimizing project outcomes.
- Training and Standardization: I conducted comprehensive training sessions for multiple EPCs, including Fluor, JGC, Bechtel, and URS, to familiarize them with Shell's standards and configurations. This effort aimed to ensure uniformity and compliance throughout the project lifecycle.
- Document Management and Control: I demonstrated expertise in document management and control using SPF (Smart Plant Foundation) specifically tailored to Shell's requirements. This ensured efficient organization, access, and control of project documentation.

2010- 2012

Project Lead | Cubic Transportation | Portable Devices

Design and develop Windows mobile applications for new generation devices like Motorola bar code readers. Working with different SDK's supplied by the manufacturer to interface with the HW of the portable devices.

2004-2010

Project Lead | Intergraph | PPM

Acted as an interface for the end users of the product to understand the requirement and translate the same into technical solutions. Provided support for Installation/Setup of the products at the client site. Actively involved in Publish and Retrieve of Cable Schedule Document from SPEL and SPF and then to SP3D. Mapping of Properties and Relationships and writing custom commands to trigger operations during retrieval of objects.

2003-2004

Technical Service Representative | Dell | CSA

Technical Support Representative.

Education

IIIT | Hyderabad, India

May 2017, Diploma in Artificial Intelligence and Machine Learning

JNTU | Hyderabad, India

May 2002 | Bachelor of Technology in Mechanical Engineering
