

Jayit Saha

EDUCATION

Vellore Institute of Technology
CGPA 9.42 / 10, Best Outgoing Student

Bachelor of Technology (SCSE)
Jul 2018 – Jun 2022

PROFESSIONAL EXPERIENCE

Walmart Global Tech India

Bangalore, India

Data Scientist III

Jul 2024 – Present

- Designed real-world applications with generative models, leveraging Langchain & LangGraph, and filed patents.
- Developed fine-tuned models, RAG systems, and productionized ML pipelines to process billions of data points.

Data Scientist II

Jul 2022 – Jul 2024

- Built models for forecasting, anomaly detection, & quality reporting to improve supply chain & data reliability.
- Evaluated GPU Rapids vs PySpark for large-scale data processing & optimizing performance for billions of data

Data Science Intern

Jan 2022 – Jul 2022

- Built a Semi-AutoML solution with Ensemble Learning, DeepAR, and Dask clusters for efficient forecasting
- Developed a MLflow Manager & streamlined 15+ modules to optimize workflows and align with business goals

RESEARCH EXPERIENCE

Nanyang Technological University

Singapore

Research Fellow

Aug 2021 – Jan 2022

- Developed a FinBERT-based sentiment pipeline with 84% accuracy, integrating sentiment & engagement metrics
- Published findings in ICIS, uncovering non-linear links between social media sentiment & Bitcoin trading volumes

University of Guelph

Guelph, Canada

MITACS Globalink Research Fellow

May 2021 – Jul 2021

- Built a scalable React Native app for iOS & Android, ensuring a seamless user experience & AODA compliance.
- Integrated data workflows and tools to support ecological research and experiential learning.

TOP PUBLICATIONS

Early Disease Detection Of Leaves Using Deep Learning And Drones

2023

SSRN

1 citation

- The paper proposes a drone to capture underside leaf images, detecting diseases missed by aerial methods.
- Using VGG16 and ResNet, the system achieves high accuracy in leaf health classification.

Does Social Media Sentiment Predict Bitcoin Trading Volume?

2022

International Conference on Information Systems (ICIS)

5 citations

- The paper uses FinBERT and information gain to analyze Bitcoin sentiment with state-of-the-art accuracy.
- It discovers a nonlinear sentiment-volume relationship using LSTM, with a 3–4 hour predictive horizon.

Design of waste management system using ensemble neural networks

2022

Designs Journal

9 citations

- The paper uses Mask RCNN and YOLOv5 for waste detection and classification with 93.65% accuracy.
- It employs SFM for volumetric estimation and VGG16 for organic waste classification.

Developing A Transdisciplinary Citizen Science Tool: Squirrel Life

2022

International Technology, Education and Development Conference (INTED)

3 citations

- The paper develops the Squirrel Life app using React Native for inclusive citizen science and learning.
- It applies Agile and AODA standards ensuring accessibility and usability

Adoption of precision agriculture by detecting and spraying herbicide using UAV

2021

Basrah Journal of Agricultural Sciences

7 citations

- Weed detection using YOLOv3 and KNN - 92.6% and 95.4% accuracy for distant and close-range UAV detection.
- It integrates OpenCV and Gaussian filters for image processing, enabling precise herbicide spraying via drones.

AI crop predictor and weed detector using wireless technologies

2020

Arabian Journal for Science and Engineering

45 citations

- Naïve Bayes applied for crop recommendation and YOLOv3 with CNN for weed detection using drone imagery
- It employs WSN for real-time environmental monitoring, combining IoT and AI to enhance precision agriculture

PATENTS

System And Methods For Automatic Data And Insight Support Using Natural Language Model

Patent Filed (Walmart)

Dec 2023 - May 2024

FaaS - Forecasting as a Service: A Semi AutoML Solution

Provisional Patent Filing in Process (Walmart)

Sept 2023 – Present

A mobile solution for Sleep Apnea Detection via Deep Neural Techniques on Snore Audio

Work In Progress (Vellore Institute of Technology)

Present

AWARDS

- Google HashCode World Finalist: **International Rank 30**
- **Best Outgoing Student Award** - Vellore Institute of Technology (All Schools)
- **Nanyang Technological University** - India Connect Research Fellow Awardee
- **HackGlobal** Finalist - Represented India in the World Finals
- Category Winner - **Walmart Global Techathon** - Flagship Hackathon of Walmart Global Tech
- Grand Winner - **Google GenAI Exchange Hackathon** - APAC Region
- Grand Winner - **HackBangalore** - National Hackathon
- 2nd Rank Nationally at **Unstop Awards 2022: Unstop Competitive E-School Leader 2022** Category
- Featured in **Forbes India** April 2022 Edition for **The Best Engineering Student Category**
- **The Economic Times** Campus Stars Class of 2021
- Global Winner **Hack Bangalore 2024**
- Global Techathon 2023 **Category Winner**
- Data Ventures Hack - Walmart **Runners Up**
- Winner of **Rakutens' Flagship Hackathon - Rakathon '22**
- Winner of **Optum Stratethon Season 3** International Hackathon
- Winner of **Route Mobile RAPID** International Hackathon
- Winner of **Hackathon Atmanirbhar Bharat 59** National Hackathon
- First Runners Up **Optum Stratethon S02** International Hackathon
- National Finalist in **Myntra HackerRamp - 2021** (Top 7)
- Second Runners Up of **Weavy Build Tomorrow** Hackathon
- Second Runners Up and Winner of Ren Track of **DevJams' 21**
- Recognized as **most crucial data scientist** in the org in Q4 2023 at Walmart
- Published paper **MLOps and Quality Assurance Framework for Data Science Modelling at Scale** - SparkTech Summit - Walmarts Flagship Research Conference
- Ranked among top 10 teams all over Walmart - **Walmart x Google GenAI Hackathon**

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ACADEMIC SERVICE

- Reviewer at **Knowledge and Information Systems (KAIS)** - Springer Indexed Journal - Impact Factor: **3.161**
- **University Teaching Assistant** - Vellore Institute of Technology
- **Programme Representative** - Vellore Institute of Technology (**School of Computer Science**)

SKILLS

Skills: Generative Models, Deep Learning, Machine Learning, Computer Vision, NLP, Python, PyTorch, Tensorflow, Django, ReactJS, NodeJS, React Native, JAVA, C++, OpenCV, Keras, PySpark, Azure, Kubernetes, SQL

Interests: Large Language Models, Multimodality, Reinforcement Learning, Recommender Systems, NLU, Big Data

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