

JERIN JACK JOSEPH RAJ

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EDUCATION

Master's in information technology and management

Illinois Institute of Technology, Chicago

GPA- 4.00*

Expected May 2025

Coursework: Project Management for Information Technology Management, Object-Oriented System Analysis Modelling and Design, Advance Topics in Database Management, Data Warehousing, Database Security.

Bachelor's Electrical and Electronics Engineering

Anna University, India

GPA- 7.74/10

July 2017 - Apr 2021

SKILLS

Programming and Scripting Languages: Python, R, SQL, Scala, JavaScript, JAVA, SpringBoot, HTML, CSS.

Tools: Git, Slack, Tableau, Power BI, Apache Spark, AWS, Hadoop, Jupyter Notebooks, SoapUI, Docker, Kubernetes, WSO2.

Operating Systems/Architecture: Unix/Linux, Windows, Apple macOS

PROFESSIONAL EXPERIENCE

Software Developer – Tata Consultancy Services, Chennai, India.

Oct 2021- July 2023

- Spearheaded the development and management of API lifecycle for banking projects, focusing on open banking and API banking solutions.
- Designed and implemented API mockers and APIs using WSO2 Integration Studio, enhancing transactional operations and system efficiencies in banking processes and led the deployment and maintenance of APIs on servers, ensuring robust performance and compliance with industry standards.
- Played a key role in monitoring and managing API lifecycle, from creation to deployment on servers.
- Extracted and analyzed data from databases, preparing JSON schemas to support decision-making in banking projects.
- Innovated an automated corporate TPP (Third Party Provider) onboarding process, streamlining customer integration and data retrieval.
- Developed and integrated RESTful APIs in WSO2 Integration Studio, leveraging SOAP endpoints for enhanced banking transaction processes.

Iota automation Private Limited, Chennai, India

- Developed ML Algorithm for Equipment Degradation Detection Project for a powerplant.
- Achieved 95% accuracy in identifying slag/soot in power plant furnaces using image/video analytics.
- Enhanced AI Platform: Utilized Python, TensorFlow, and OpenCV for algorithm development; improved preventive maintenance efficiency by 30%.
- Reporting and Analysis Complexity: Overcame challenges in quantifying algorithm impact.
- Developed a comprehensive metric system, resulting in a 25% reduction in unplanned downtimes being accurately reported.

PROJECT EXPERIENCE

Website Design for NCSETAS 2020

- Orchestrated the design and development of the official website for the National Conference on Social, Economic & Technological Impact of Alternate Energy Sources (NCSETAS 2020) in Meenakshi Sundararajan Engineering College
- Played a key role in amplifying awareness about alternate energy sources through the conference website. The platform effectively highlighted pressing global warming issues and sustainability initiatives, mirroring the conference's focus on the socio-economic benefits of energy transitions.

Load Forecasting in U.S. Utility Sectors

- Developed a load forecasting model using Ridge Regression and Decision Tree Regressor for U.S. utility companies, covering 20 zones. The model achieved 93% accuracy post-tuning in predicting hourly power loads.
- Utilized Python, pandas, and scikit-learn for data manipulation, model training, and evaluation. Conducted detailed data analysis of load and temperature datasets spanning from 2004 to 2008.
- Managed large-scale datasets, processing and forecasting loads for June 2008 as a case study, demonstrating capabilities in handling temporal data and predicting utility trends.

Comprehensive Software Development Initiatives in Java, Python, and SQL:

- Agile Java Development with Gradle- Enhanced test execution efficiency by 25% and improved error handling in software development.
- MQTT Implementation for IoT- Enabled MQTT command control of IoT simulator, increasing message transmission efficiency by 30%.
- RESTful Services with Spring Boot- Developed scalable web service, enhancing user interface scalability and reducing response time by 15%.
- ReactJS Frontend for IoT Device Management- Created a ReactJS-based interface, increasing user engagement and device control efficiency by 40%.
- Data Visualization with Apache E-Charts-. Developed interactive data visualization for IoT devices, enhancing user data interpretation and decision-making accuracy by 45%

Optimization of Emergency Response Times in Urban Traffic Using Data Analytics and Simulation- April 2021

- Data-Driven Optimization of Ambulance achieving a 25% reduction in ambulance response times during peak urban traffic using predictive modeling and route optimization algorithms using NumPy, Matplotlib and TensorFlow
- Simulation and Implementation- Utilized Simulation of Urban Mobility (SUMO) for realistic traffic simulation, ensuring effective implementation and operation of the system using QGIS.

PUBLICATIONS

- Presented a paper on “Design and development of DNA Data storage” in Indo-US conference on bioengineering and regenerative medicine held at school of Biochemical Engineering, IIT(BHU) on 27-29 Feb 2020.
- Published a paper on “Artificial Intelligence” in International Conference on “Science & Innovative Engineering”, Mar 2019.

ACADEMIC AWARDS and SOCIALLY IMPACTFUL EXTRA-CURRICULAR ACTIVITIES

- Recognized with the prestigious "Star of the Month" award at Tata Consultancy Services in November 2023 for exceptional performance and significant contributions to API development and optimization in banking projects.
- Vice President, ETA Electrical Technocrats Association, MSEC (June 2019 - Mar 2020): Spearheaded a team of 2 editors to curate and optimize content for weekly newsletters. Successfully secured funding for top project ideas, leading to a 50% increase in association projects.
- Event Coordinator, EPSILON 2k19, National Technical Symposium, MSEC, Chennai (2019): Orchestrated a large-scale technical symposium, coordinating logistics and programming for over 1000 participants.
- Oxygen Generator Project for COVID-19 Relief, India (2021): Engineered and donated 36 numbers of AICTE-approved Oxygen concentrators to government hospitals, aiding in the treatment of 200+ COVID-19 patients in September 2020.