**Sudarsan Nallur Murali**  
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# EDUCATION

**Master of Science**: **Business Analytics and Project Management,** University of Connecticut, Hartford. **Aug 2023 - May 2025**

**Bachelor of Technology: Computer Science Engineering,** SASTRA Deemed University, India. **Jul 2017 -** **Jun 2021**

# TECHNICAL SKILLS

**Programming Languages and Database:** C, C++, C#,Java,Python, R, SQL, CSS, HTML.

**Machine Learning/NLP Frameworks:** NTLK, Pandas, Tensorflow, Matplotlib, PyTorch, SciKit-Learn, NLP, NumPy.  
**Tools/IDE:** DBeaver, SAS, JMP, Jupyter Notebook, RStudio, GitHub, Azure Databricks, Atlassian JIRA, Visio.

**Management:** Project Management, Agile Methodology, Budget Planning, Documentation, Quality Assurance, Risk Management.

**Course Work:** Data Management, Statistics in Business Analytics, Predictive Modeling, Visual Analytics (Tableau), Business Decision Modeling, Data Science (Python), Data Mining (Forecasting & Text Mining).

# PROFESSIONAL EXPERIENCE

**Ananda AI – Hartford, Connecticut Aug 2024 - Dec 2024**

# Gen AI Developer Intern

* Created a chatbot for Ananda AI utilizing LLMs like Llama3-8b-8192, transformed user engagement by delivering accurate real-time answers on cryptocurrency inquiries through innovative conversational techniques.
* Implemented a Retrieval-Augmented Generation (RAG) pipeline, integrating proprietary company data with Langchain for robust conversational workflows, achieving 90% log traceability and enhanced domain specific response accuracy.
* Deployed the chatbot on a cloud-based architecture with FAISS and PyPDF, reducing data retrieval time by 40% and boosting system processing speed by 25%.
* Developed and engineered over 50 technical indicators, including SMA, EMA, RSI, MACD, and Bollinger Bands, leveraging TA-Lib to generate robust buy/sell signals across different timeframes (15 mins to 1 week).
* Backtested 100+ indicator time window combinations and optimized trading strategies using Backtrader, achieving a 13% annualized return with improved Sharpe ratio, while aligning risk metrics to investor expectations and enhancing portfolio performance.
* Led and facilitated communication for a team of 10 as the primary sponsor liaison, ensuring seamless project updates and alignment between the team and company stakeholders, culminating in a comprehensive presentation to C-suite executives.

**Collins Aerospace – Bengaluru, India Jul 2021 - Jul 2023**

# Associate Data Engineer

* Automated 62% of test cases, reducing manual intervention and improving the testing framework with NUnit, resulting in an annual cost savings of $20,000.
* Collaborated with stakeholders to test production releases, present demonstrations, and gather feedback, guaranteeing 100% client satisfaction and software consistency.
* Designed and architected workflow comprising 631 test cases, increasing transparency and streamlining future development.

# Graduate Trainee Analyst Feb 2021 - Jul 2021

* Managed 30+ relational database tables using SQL to derive actionable insights and collaborated with clients to develop and validate user test cases, ensuring the results met precise business requirements.
* Excelled in a fast-paced Agile environment with 12 members, identifying and resolving potential bugs, validating fixes, and delivering high-quality projects within tight deadlines.

# ACADEMIC PROJECTS

**Cryptocurrency Price Prediction** (Pandas, Numpy, Matplotlib, Imblearn, Pipeline)

# Delivered a 77% accuracy, with a 91% recall in correctly predicting positive cases. Balanced precision and recall, achieving a weighted F1 score of 0.756, demonstrating strong model performance.

# Developed and tested predictive models using SciKit-Learn and TensorFlow on cryptocurrency price forecasting. Employed advanced machine learning techniques including Random Forest and sequence processing, which improved model accuracy by 15% over baseline models.

# Reduced large feature set variables using permutation importance, and partial dependence plots, decreasing model run time by 30%.

**Advanced Job Post Analytics for Optimized Classification** (NLTK, SMOTE, Pylab, Seaborn)

* Led a data mining project by extracting, cleaning, and preprocessing textual data from over 19,000 job postings. Implemented NLP techniques including tokenization, TF-IDF vectorization, and lemmatization to prepare data for machine learning.
* Achieved model accuracy up to 91.8% with a precision of 92.3% using Random Forest, increasing the accuracy by 7% by utilizing proper stop-words, stemming techniques and giving keywords required for job clearing.

# ACTIVITIES & ACHIEVEMENTS

Supervisor at UConn Dining Services, Best Fresher Award at Collins Aerospace, Planet Education Campus Ambassador, Spearheaded DAKSH Marketing & Sales Team.