# iravani Hariprasad

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#### **EDUCATION**

San Diego State University

Master of Science in Big Data Analytics(GPA: 4/4)

Anna University

Bachelor of Engineering in Electronics and Instrumentation(GPA : 3.85/4)

#### **EXPERIENCE**

#### L&T Infotech

Senior Software Data Engineer

- Automated natural language commentary and variance analysis in financial data, reducing manual report creation time by 60%.
- Implemented the Isolation Forest model, achieving a 20% reduction in false positives and an 85% improvement in identifying impacted nodes during variance threshold breaches.
- Automated ETL pipeline with Python scripts, slashing data cleaning and transformation time by 25% from the former manual Excel process.
- Utilized Power BI to visually represent financial data, enabling clients to identify trends and variances between report periods more efficiently, resulting in a 5% faster decision-making process for clients.

#### **Cognizant Technology Solutions**

Data Engineer Intern

- Developed SQL logic queries for aggregate views using MySQL Workbench and AWS-RDS database, efficiently managing and extracting insights from a substantial 1TB dataset.
- Detailed data governance requirements, leveraged Python, Apache Spark and AWS services (S3, Amazon Glue ETL processes) to automate tasks and achieve a 30% reduction in data processing time, significantly enhancing workflow efficiency.

## **RESEARCH AND PROJECTS**

#### Deep Learning Image Classification with Google Street Views (GSV) - HDMA Lab Jun 2023 – Present

- Utilized YOLO deep learning models, trained with a custom dataset sourced from Google Street View images, to expedite spatial analysis in addressing homelessness in downtown San Diego, achieving a notable 60% acceleration in pattern recognition.
- Expected to improve model accuracy by 15%, showcasing the potential for real-world applications in addressing homelessness and urban planning.

#### Content Analysis of HIV Prevention Drug - PrEP(Co-author)

- Co-authoring an **NIH grant-funded** project analyzing public perceptions of PrEP through social media.
- Visualized and created 5+ dashboards for different categories using **Tableau**, presenting 10+ major characteristics about PrEP.
- Identified the most discussed concern through topic modeling: the project quantified that 40% of social media discussions highlighted concerns about accessibility to PrEP.
- Expected results include a 20% increase in awareness, a 30% reduction in stigma, and data-driven recommendations for tailored interventions. Feb 2023 - May 2023

#### Image Caption Generation of the MSCOCO Dataset (Team Leader)

- Built a full-end ML project in **PySpark** on GCP, leveraging its distributed computing capabilities to efficiently handle large-scale COCO dataset and ETL workflows using AirFlow and improving data processing time by 50%.
- Pre-trained an **Xception-LSTM** model using TensorFlow within the **GCP-based PySpark** environment for generating image captions, cutting down the loss to 1.85%.
- Evaluated model performance using standard metrics, achieving a BLEU score of 0.35.

#### Human Activity Recognition (Team Leader)

- Aug 2022 Dec 2022 • Examined machine learning techniques for diverse human activity prediction in hospital environments with both raw time-series and feature-engineered data.
- Attained an impressive 96.47% accuracy and a minimal 3.3% error rate on feature-engineered data with ML models like Linear SVC, outperforming deep learning models.

#### Analysis of public sentiments on climate change for formulating policies

• Performed sentiment analysis on climate change via Twitter, utilizing Named Entity Extraction for targeted policy insights. The Logistic Regression model, with a 70% accuracy in sentiment analysis, offered valuable insights for potential policy formulation.

## ACCOMPLISHMENTS

- One of the five recipients of the 2023-2024 SDSU Master's Research Scholarship (\$10,000) for outstanding academic performance and contributions to research.
- Techgium Competition 2019-20 Certificate of Recognition for innovative concept on Multilingual Text Extraction from Videos using YOLO by Larsen & Toubro Technology Solutions.

#### SKILLS

Languages	Python, R, Java, JavaScript, SQL, HTML, CSS
Frameworks	Pandas, Matplotlib, scikit-learn, TensorFlow, Keras, PyTorch, NLTK, Django
Tools	Excel, Tableau, PowerBI, ArcGIS Pro, Jira, Hadoop, Spark, Hive, Agile, Git, DevOps, Docker
Database	MySQL, PostgreSQL, MongoDB, Google BigTable
Cloud Technologies	AWS (EC2 Instance, S3 Bucket, Glue, RedShift), Google Cloud (Big Ouery, Bucket, DataProc), Azure

Aug 2022 – May 2024 San Diego, California Aug 2017 – Jun 2021 Chennai, India

#### Jul 2021 – Jul 2022

Mumbai, India

Mar 2023 – Present

#### Sep 2022 - Dec 2022



Chennai, India

Jan 2021 – Jun 2021