HEMANTH MYDUGOLAM

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EDUCATION

University of Texas at Dallas, Richardson, TX   **Aug 2022 - May 2024**
Master of Science in Business Analytics
Relevant Courses: Data Visualization, Predictive Analytics, Econometrics & time-series Analysis, AWS Cloud, Advanced Statistics
Jawaharlal Nehru Technological University, Anantapur, India   **Aug 2013 - Apr 2017**
Bachelor of Technology in Electronics and Communication Engineering
Relevant Courses: C, Network Analysis, Linear Algebra, Vector calculus, Java Programming, Signals and Systems, Communications

SKILLS

Programming Languages	**:** C, Java, Python, R, SQL, Javascript, SAS
Framework & Libraries	**:** LangChain, OpenAI, Ultralytics, PyTorch, Pandas, Numpy, Rshiny, Plotly, Dplyr, Ggplot2
Databases	**:** Oracle, MySQL, MS SQL Server, SQLite
Analytics & Automation	**:** Power BI, Tableau, Looker, Alteryx, Minitab, Google Analytics, Splunk, Excel, KNIME
Cloud Technologies, Cloud Native and DevOps	**:** AWS Cloud (EC2, SageMaker, S3), Git, Docker, Google Cloud (BigQuery, Vertex AI)
Machine Learning, Deep Learning & NLP	**:** Scikit-learn, Keras, Caret, Tensorflow, NLTK, Spacy, Gensim, Scipy, matplotlib
Microsoft Tools	**:** Advanced Excel, Power Automate, Power Apps, PowerPoint, SharePoint

PROFESSIONAL EXPERIENCE

Center for Advanced Pain Studies, Dallas   **Apr 2023 – Present**
Data Scientist
- Developed image segmentation models using **fastai** and **YOLO** too segment Xenium, DRG, and spinal cord data datasets, reducing manual annotation time by **80%** and improving segmentation accuracy by **25%**, significantly enhancing the precision in biomedical image analysis.
- Developed an **LLM-driven** research assistant using agentic AI to automate literature review across internal lab publications, reducing manual review time by 70% through intelligent summarization, categorization, and keyword-based retiral of 100+ documents.
- Built a Gen AI research assistant bot using **RAG architecture** to handle CAPS specific queries by users, reducing in manual search time.
- Developed a comprehensive **Power BI** dashboard with **data modeling** & **DAX** queries for budgets, enabling stakeholders to efficiently allocate and monitor expenditure, resulting in **25%** reduction in administrative time and enhanced financial decision-making capabilities.
- Utilized expertise in **RShiny** to design, develop, and maintain visually appealing and interactive Genomics, Transcriptomics, Proteomics dashboards, enabling users to interact seamlessly with large and complex datasets. Managed web apps using **Git** for version control.
- Developed a social media analytics dashboard in **Power BI,** leveraging SQL and DAX queries to track engagement metrics across multiple platforms, increasing efficiency by **40%** and optimizing content scheduling for a **30%** improvement in audience reach.
- Collaborated with research scientist and computational teams to streamline operations by automating the standard statistical tests, raw data cleaning, generating visualizations by utilizing **Python**, **R** and building robust **pipelines** for calcium imaging process using Python.

Honeywell, Bangalore   **Aug 2019 – Jul 2022**
Data Scientist II
- Developed a resource **acquisition model** using random forest algorithm in **Python** and data from **My SQL Server**, resulting 30% reduction in hiring time and forecasted the terminations and vacancies for upcoming quarters using 85% accuracy.
- Led cross functional collaborations, working with sales and marketing communication teams to create detailed sales and communication **analytics** dashboard using **Power BI**. Applied regression, trend analysis, bench marking to identify **key insights** for stakeholders.
- Developed **KPI** metrics to evaluate employee and team effectiveness using descriptive **statistics** and automated the end-to-end process using **Alteryx** ETL tool and R programming, saving nearly 600 hours annually.
- Designed, implemented the compensation offer tool, a statistical model that provided managers and hiring teams with valuable insights for new hire and internal job changes, utilizing an RShiny dashboard as user interface and **SQL**.
- Collaborated in building predictive model for employee churn prediction, enabling **HR leadership** to prevent turnover by providing prescriptions that save $10 million annually.
- Utilized Python to implement quantitative analysis and **NLP** models for sentiment analysis and topic extraction on surveys and comms data.

Cognizant, Chennai   **Mar 2018 – Aug 2019**
Programmer Analyst
- Developed and deployed a **smart auditing process** using machine learning techniques across multiple marketing regions of a manufacturing client, resulting in 15% increase in transaction error capture and saved 3.7 FTE.
- **Presented key findings** from invoice processing optimization models to finance teams leading a 10 % increase in transactional efficiency.
- Created and delivered weekly reports to stakeholders, tracking invoice inflow and auditing flow by analyzing processed and audited invoice data using **advanced Excel** functions such as **PivotTables**, lookup functions, **Power BI** and **SQL** and **summarizing** functions.

ACADEMIC PROJECTS

Alteryx Hackathon – Optimizing Capital Investment for NOV   **Alteryx, Tableau, Python, SQL**
- Developed a data pipeline using Alteryx to cleanse and integrate financial transactions data from three NOV divisions to identify invest opportunities for 2023. Performed statistical analysis (regression, t-tests, ANOVA) to reveal trends and insights for capital allocation.
- Visualized insights in Tableau, providing data-driven recommendations to maximize shareholder value.

Enrollment Forecasting using Amazon SageMaker   **ARIMA, Randormforest, AWS**
- Built, trained, and deployed an enrollment forecasting machine learning models using Amazon SageMaker, leveraging its scalable infrastructure for automated data processing, model training, hyperparameter tuning, and hosting.
- Ensembled models has achieved overall average 92% accuracy across different programs in university and enablinig data-driven planning through a streamlined end-to-end ML pipeline.