# Dhanush Chalicheemala

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**EDUCATION** 

University of California, Riverside

Master's, Computational Data Science(GPA: 3.8)

Vellore Institute of Technology, Vellore

Bachelor of Technology, Information Technology(GPA: 8.43)

September 2024 - Present

Riverside. California

July 2020 - May 2024

Vellore, Tamil Nadu

#### **SKILLS**

• Languages: Python (Pandas; NumPy; Matplotlib; NLTK; Keras; Seaborn; Tensorflow); SQL

- Databases: MySQL; Google Cloud Storage; Amazon DynamoDB
- Machine Learning: Linear Regression; Logistic Regression; Decision Trees; SVM; KNN; Neural Networks
- Other Tools: AWS; Google Cloud Platform; Tableau; Git; Jupyter Notebook

#### EXPERIENCE

# Vellore Institute of Technology $(\underline{Link})$

June 2022 - July 2024

# Research Assistant under <u>Dr.B. Valarmathi</u>

- Engineered predictive models using ANN/RNN architectures achieving 95.7% accuracy with SMOTE balancing.
- Designed and deployed an LSTM-based sentiment analysis model, achieving 96% accuracy across 179K COVID-19 tweets to drive actionable, data-driven insights.
- Streamlined data preprocessing pipelines, boosting ANN/RNN accuracy by 20% under Dr. B. Valarmathi's guidance.

# Eavetop Softtech Private Limited (Link)

December 2023 – July 2024

#### Data Scientist Intern

- Engineered automated CAD system using U-Net/Mask R-CNN, processing 10K+ aerial images at 98% accuracy.
- System achieved 40% reduction in measurement time and improved accuracy compared to manual methods.
- Enhanced the roof measurement process by reducing report drafting time by 50% and cutting costs by 30%.

#### Amara Raja Group (Link)

May 2023 - June 2023

#### Data Scientist Intern

- Devised solar power prediction model (95% accuracy) leveraging 50K+ weather data entries, boosting Amara Raja's grid efficiency by 20%.
- Fine-tuned predictive model achieving RMSE 2.5, MAE 1.8, and MAPE 3.5% via 10-fold cross-validation.
- Streamlined supply-demand balancing via real-time analytics, slashing blackout by 18% and boosting reliability by 20%.

### **PUBLICATIONS**

- prediction of children Undergoing Hematopoietic Stem Cell Transplantation using Deep Learning Algorithms, Under review by Taylor & Francis.
- Sentiment Analysis of Covid-19 Twitter Data using Deep Learning Algorithm, ICMLDE 2023, ELSEVIER (Link).
- Single Image Haze Removal with Radiance Reflectance Minimization Using Illuminated Optimization and K-Means Clustering, IJRASET 2023 (Link).

#### **PROJECTS**

# Survival Prediction of Children Undergoing Hematopoietic Cell Transplantation. (Github)

- Developed a 95.7% accurate model for children's survival after Bone Marrow Transplant using ANN, RNN, and GRNN.
- Applied SMOTE for data balancing and Pearson Correlation for feature selection to enhance model performance.

#### Skin Cancer Detection Using Hybrid Deep Learning Model. (Github)

- Optimized hybrid models (DenseNet121, VGG16, Xception) to achieve 93% accuracy on the ISIC2020 dataset.
- Reduced misdiagnosis 20% and boosted early detection 5% via predictive analytics (10K+ clinical datasets).

#### F1 Racing Records Data Engineering and Analysis (Github)

- Built a data pipeline with Azure tools (Data Lake Gen 2, Databricks, Synapse Analytics) to process F1 data.
- Delivered actionable insights and scalable analytics via a custom-built dashboard for enhanced decision-making.

#### LEADERSHIP

# The Artificial Intelligence and Machine Learning Club(TAM)

2023 - 2024

Secretary Vellore Institute of Technology

- $\bullet \ \ {\bf Hosted\ hackathons\ and\ workshops\ to\ provide\ hands-on\ {\bf AI/ML\ learning,\ empowering\ over\ 1,000\ community\ members.}$
- Partnered with companies like Clarifai AI and Jio to enhance networking opportunities and deliver real-world insights.