THANMAYEE YELURI

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PROFESSIONAL STATEMENT   [Availability: internship, Summer 2025]

Graduate Research Assistant specializing in **Bioinformatics, Machine Learning, and Data Analytics**. Experienced in high-throughput sequencing data analysis, computational biology, and epigenomics research. Proficient in **Python, R, and statistical modeling**, with expertise in analyzing **DNA methylation patterns and differential gene expression**. Passionate about integrating computational tools to advance biological research.

RESEARCH EXPERIENCE AND PROJECTS

Machine Learning for DMR Classification in Seal Species
- Investigated Differentially Methylated Regions (DMRs) in three seal species using Fully Connected Neural Networks (FCNN).
- Processed CG files using the BSSeeker pipeline and performed differential methylation analysis.
- Improved classification accuracy and enhanced understanding of adaptive methylation patterns.

Precision Agriculture Using UAVs & sUAS
- Conducted research on crop health monitoring using high-resolution aerial imagery.
- Developed machine learning models to correlate NDVI measurements with environmental factors.

IoT-Based Air Quality Monitoring System
- Designed an air quality monitoring system integrating multiple sensors with Raspberry Pi.
- Developed a web-based dashboard for real-time environmental monitoring and data visualization.

Autonomous Agricultural Robot for Precision Farming
- Developed an AI-powered robotic system for soil analysis and automated farming.
- Integrated RTK GPS and spectroscopic sensors for precise environmental monitoring.

EDUCATION

- Ph.D., Computer Engineering, Prairie View A&M University, Texas, USA   *(Expected Graduation 2027)*
  GPA: 4.0/4.0
  Skills: Machine Learning, Bioinformatics, DNA Methylation Analysis, Data Science
- M.S., Computer Information Systems, Prairie View A&M University, Texas, USA *(Graduated May 2024)*
  GPA: 3.7/4.0
  Skills: Predictive Modeling, High-Performance Computing, Cloud Computing
- B.S., Telecommunications, Jawaharlal Institute of Technology, India *(Graduated July 2022)*
  GPA: 3.5/4.0

JOB EXPERIENCE

Graduate Research Assistant, Prairie View A&M University, Texas, USA   *(Aug 2024 - Present)*
Engaged in bioinformatics projects focused on DNA and RNA sequencing analysis. Developed scripts for large sequencing datasets using R and Bioconductor. Collaborated with interdisciplinary teams for genetic data interpretation.

Graduate Research Assistant, Prairie View A&M University, Texas, USA   *(Feb 2023 –May2024)*
Conducted research on crop health monitoring using high-resolution aerial imagery (Precision Agriculture using UAVs & sUAS). Developed a real-time environmental monitoring system using Raspberry Pi and cloud integration (IoT-based Air Quality Monitoring System). Designed an AI-powered robotic system for soil analysis and automated farming (Autonomous Agricultural Robot for Precision Farming).

CERTIFICATIONS AND COURSES
- Microsoft Azure Fundamentals (AZ-900)
- Fundamentals of Deep Learning (NVIDIA)
- R Programming Certification (W3 Schools)