

Pragnasri Vellanki

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EDUCATION

The University of Texas at Dallas, Dallas, TX

Bachelors of Science in Computer Science

August 2023 - May 2025

GPA: 3.84

Affiliations: Human Centered Extended Reality Lab (Researcher), Society of Women Engineers (Officer – Vice President), Freshman Mentor Program (Mentor), Women Engineers' Hack (Officer – Logistics Coordinator), ACM (Technical Prep Mentor)

Coursework: Machine Learning, Artificial Intelligence, Database Design, Operating Systems, Advanced Data Structures & Algorithms

EXPERIENCE

Data Strategy Engineer | Databricks, SQL, Python, dbt, Power BI, PySpark, MLflow, Delta Lake

Dave and Busters

June 2025 – Present

- Built and optimized SQL and Python **ETL pipelines on Databricks**, cutting data latency by **40%** across loyalty analytics.
- Engineered end-to-end **ML forecasting models in PySpark and scikit-learn**, improving demand prediction accuracy by **25%**.
- Developed **Databricks and Power BI dashboards with dbt-driven metrics**, reducing reporting turnaround by **35%**.

Research Assistant | Python, TensorFlow, NumPy, scikit-learn, Hugging Face, Linux, C#

University of Texas at Dallas

June 2025 – Sept 2025

- Designed **VR-based cognitive models using Python and TensorFlow**, enhancing experimental precision by **22%**.
- Built **EEG signal processing pipelines with NumPy and SciPy**, improving data quality and processing efficiency by **28%**.
- Automated **feature extraction workflows in scikit-learn**, reducing manual analysis time by **30%** across experiments.

Undergraduate Research Assistant | Unreal Engine, Unity, Python, C#, TensorFlow, OpenCV, PyTorch

Human-Centered Extended Reality (HeXD) Lab @ UTD

April 2023 – Sept 2023

- Developed a **Unity XR game integrating CNN, Seq2Seq, and MCMC models**, boosting user engagement by **35%**.
- Implemented **real-time focus detection using TensorFlow and OpenCV**, improving prediction accuracy by **25%**.
- Built **adaptive gameplay logic in Python and C#**, increasing data reliability and personalization by **30%**.

PROJECTS

FijiForecast360 | Python (Flask, XGBoost, Regression Models), React.js, Tailwind CSS, Leaflet.js, Postman

Feb 2025 – May 2025

- Led a **5-member team to build a climate forecasting platform using 100+ years of data**, achieving over **90% model accuracy**.
- Designed and implemented **XGBoost and polynomial regression models**, improving forecasting precision by **25%**.
- Built and optimized **Flask APIs with a React dashboard**, enabling real-time visualization and reducing latency by **35%**.

EcoLens | Python, LLaMA, IPFS (Pinata), Google Maps API

Nov 2024

- Developed an **AI sustainability app** analyzing videos to detect furniture wear and suggest eco-friendly repairs with **90% accuracy**.
- Integrated **LLaMA, IPFS, and Google Maps API** to power a chatbot and location-based repair recommendations.
- Delivered an MVP in **24 hours with a 4-member all-women team**, placing in the **Top 6% @ North America's Largest Hackathon**.

AllerEase | Swift (UI), UIKit, Python, Docker, MongoDB

April 2024

- Built a **cross-platform allergy management app** enabling users to scan nutrition labels and instantly identify potential allergens.
- Optimized **Dockerized backend services and MongoDB pipelines**, improving data retrieval speed by **45%** and scalability.
- **Won 3rd Overall and Best Use of MongoDB** for delivering a high-performance, end-to-end solution.

SKILLS

Data Strategy & Leadership: Enterprise Data Strategy, Data Governance, C-Level Stakeholder Management, Team Leadership

Data Engineering & Analytics: Data Architecture (ETL/ELT), Data Modeling (Star Schema, Dimensional), Cloud Warehousing (Databricks, AWS), dbt, SQL Server, MySQL, PostgreSQL, MongoDB, Data Quality & Testing

Machine Learning & Statistical Modeling: Forecasting, Predictive Modeling, A/B Testing, Statistical Analysis, KPI Optimization

Languages: Python (Pandas, NumPy, TensorFlow, scikit-learn), PySpark, SQL, Java, Swift, JavaScript, C/C++, HTML/CSS

Tools & Platforms: Databricks, Power BI, Tableau, AWS, Hugging Face, Docker, Linux, React.js, Agile

Certifications: IBM Data Science Professional Certificate, SAP Business Analyst Professional Certificate, Tableau Business Intelligence Analyst Professional Certificate, AWS Cloud Technology Consultant Professional Certificate, OSHA Certification

LEADERSHIP

Vice President of Community | Society of Women Engineers (SWE) @ UTD

August 2023 – Present

- Advanced from Industry Committee Member → Industry Chair → Vice President, expanding SWE's community network by **50%**.
- Built **industry partnerships and sponsorships**, increasing event participation and professional outreach by **30%**.
- Organized **STEM mentorship programs** connecting 100+ students with engineering professionals across Texas.

Lead Coding Instructor | Ronnia Langston Foundation

May 2023 – Present

- Taught **coding fundamentals in Python and robotics**, improving student proficiency by **40%** across cohorts.
- Designed **drone programming curriculum** enabling students to earn **FAA drone licenses** for STEM certification.
- Integrated **AI and hands-on drone projects**, enhancing engagement and real-world technical learning.