# Amogh Ramagiri

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## EDUCATION

**George Washington University |** Master of Science in Data Science                          **Dec 2025 | Washington DC**
*Relevant Coursework*: Machine Learning Analysis, Visualization of Complex Data, Data Warehousing, Data Mining

**Presidency University|** B.Tech in Computer Science and Engineering (Spec. in AI and ML)          **May 2024 | Bangalore, India**

## TECHNICAL SKILLS

**Languages and Queries:** Python, R, SQL, C
**Data Analysis:** Python (Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, TensorFlow) Power BI, Tableau, Excel
**Tools:** Git, Spark, Hadoop, MySQL, MongoDB, AWS (EC2, Lambda, RDS, S3), Firebase, ETL (Apache Airflow), Snowflake

## PROFESSIONAL EXPERIENCE

**Data Science for Sustainable Development**                          **Oct 2024 – Present | Washington DC**
*Data Scientist Consultant*
- Designed strategy to reduce overall energy waste across 10 university buildings by 16%+ annually. Researched energy consumption patterns using Random Forest algorithm to identify peak usage times.
- Analyzed energy benchmarking data from 50+ university buildings, identifying critical factors impacting resource efficiency and sustainability trends to guide further research initiatives.
- Implemented unsupervised learning techniques, such as clustering and PCA, to detect anomalies in energy usage, identifying inefficiencies in building operations.
- Crafted a user-friendly interface in an interactive app hosted on the Streamlit Community Cloud; this resource facilitated real-time exploration of energy metrics across more than 50 university buildings with minimal latency.

**Factocart**                          **Mar 2024 – Aug 2024 | Bangalore, India**
*Data Scientist*
- Enabled strategic decisions about client acquisition and sales that drove 11% boost in overall sales within 6 months by analyzing 10GB+ datasets fetched from AWS S3.
- Predicted customer demand with 92% accuracy, leading to 13% reduction in stockouts and optimizing inventory management across 10+ product categories using machine learning models.
- Performed hypothesis and A/B testing to evaluate the effectiveness of marketing campaigns, identifying high-performing strategies that led to a 15% increase in conversion rates.
- Created 20 detailed analytics reports using Power BI that provided actionable insights for decision-making; this initiative enhanced data visibility and led to a more efficient sales strategy implementation.

**National Changhua University of Education**                          **Sept 2023 – Mar 2024 | Changhua, Taiwan**
*Research Assistant*
- Implemented dual-layer biometric authentication system integrating DeepFace for facial recognition and MFCC features for voice recognition, enhancing overall accuracy by 30% over traditional single-modal systems.
- Analyzed biometric authentication performance across diverse datasets, leveraging statistical techniques to validate system reliability and effectiveness.
- Architected an interactive solution via Flask and Python to access 1,200+ individual authentication records stored within NAS servers linked to Raspberry Pi units; attained meaningful gains in speed without sacrificing accuracy.

## PROJECTS

**Student Performance Indicator – AWS Cloud**
- Formulated comprehensive machine learning project to predict student performance, leveraging academic and socio-economic data; resulted in actionable insights that informed academic support strategies for 500+ students.
- Engineered a ML pipeline that streamlined data ingestion processes, transforming raw inputs into high-quality datasets for predictive modeling; achieved a 40% reduction in processing time while ensuring consistent prediction accuracy.
- Designed an efficient Continuous Delivery framework with AWS CodePipeline to streamline deployments from GitHub to AWS Elastic Beanstalk.
- Accomplished prediction accuracy of 87%, automated the deployment process reducing manual intervention by 80%, and provided a user-friendly web interface for real-time predictions.

**Credit Card Fraud Detection Using ML Pipeline**
- Constructed advanced ML pipeline utilizing innovative feature transformations such as Spline and PCA to elevate predictive accuracy by 15%, directly impacting the effectiveness of algorithms in production.
- Performed hyperparameter tuning using GridSearchCV to optimize the XGBoost classifier, achieving a high classification accuracy of 99.9%.
- Built and validated the fraud detection model on large-scale transactional datasets, enabling precise identification of fraudulent activities and reducing false positives.