# Ann Mary Thomas

*Data Analyst • Python • Power BI • SQL • Machine Learning*

## About Me

Hello! I'm **Ann Mary Thomas**, a data analyst driven by curiosity, clarity, and impact. With a background in Mechanical Automobile Engineering and a Master's in Data Analytics, I bring a unique blend of analytical rigor and real-world problem-solving to every project I tackle.

My passion lies in decoding data to uncover insights that drive smart decisions. Whether it's building interactive dashboards in Power BI, crafting predictive models using Python, or forecasting trends through time-series analysis, I thrive on translating complex information into stories that inspire action.

I've worked across academic research, clean tech, and fashion startups—where I've analyzed consumer behavior, optimized $CO_2$ emissions reporting, and developed machine learning models for energy forecasting. Each role has deepened my appreciation for data's power to transform industries and serve communities.

Currently, I'm expanding my deep learning research on electricity demand and carbon emissions at London Metropolitan University. My thesis, selected for academic publication, has opened up opportunities to work on cutting-edge sustainability analytics under expert guidance.

When I’m not immersed in data, you’ll find me exploring creative visualizations, mentoring peers, or brainstorming how to make insights more accessible to non-technical audiences. I believe the best data stories don’t just inform—they connect.

### 🧰 Tools

- Python (Pandas, NumPy, Matplotlib, scikit-learn, TensorFlow)
- Power BI
- Excel (Advanced)
- SQL
- Git, Jupyter Notebook

### 🧠 Techniques

- Data Cleaning & Validation
- Data Visualization
- Predictive Modeling
- Regression Analysis
- Time-Series Forecasting

### 🤝 Soft Skills

- Analytical Thinking
- Data Storytelling
- Team Collaboration
- Stakeholder Engagement
- Problem Solving

## 💼 Experience

### Researcher – London Metropolitan University

**Feb 2025 – present**

- Conducting deep-learning research for MSc thesis: forecasting electricity demand & $CO_2$ emissions
- Built and tuned LSTM, RNN, and RBM-NN models using Python on U.S. energy time-series data
- Engineered features, evaluated model performance, and prepared results for academic dissemination

- Collaborating with faculty on documentation, review, and editorial processes

### Data Analyst Intern – Archaiesth (fashion startup)

**May 2024 – Sep 2024**

- Analyzed purchasing patterns and demographics for a clothing brand
- Pinpointed age groups and product lines driving the most engagement and sales
- Delivered data-driven recommendations that refined marketing targeting and boosted conversions

### Junior Data Analyst – Navalt Solar and Electric Boats

**Aug 2022 – Jan 2024**

- Built predictive models to estimate $CO_2$ emissions using sea state and engine variables
- Created interactive Power BI dashboards showcasing emissions, fleet KPIs, and trends
- Automated the cleaning pipeline, increasing reporting accuracy by 70%
- Collaborated with engineering and sustainability teams to streamline workflows

## 📊 Projects

### Vehicle Emissions Dashboard

Developed a Power BI dashboard analyzing $CO_2$ emissions across vehicle types. Integrated engine capacity, vehicle mass, and fuel-type data from the EU environmental dataset. Used scatter and bar charts to highlight top emitters, and implemented interactive filters so users can compare different manufacturers, countries, and fuel types. Helped demonstrate that engine size drove ~70% of emission variance—providing clear visual insights to guide eco-strategy decisions.

### Marketing Campaign Analysis

Built a logistic regression model in Python to predict customer affinity towards promotional offers. Cleaned and preprocessed demographic and purchase history data from ~1,500 customers. Identified key features—such as age group, previous purchase volume, and product ownership—that increased campaign response by 20%. Created performance reports (accuracy, confusion matrix, ROC curve) and shared actionable recommendations that improved campaign targeting.

### Graduate Outcomes in Education

Conducted an analysis of UK higher education outcomes using HESA data. Used Random Forest and K-means clustering to explore how variables such as subject, provider type, and study mode influence employment or further study. Achieved ~45% classification accuracy across six outcome categories, with notable trends showing higher employment rates in STEM fields. Cluster analysis unveiled four distinct graduate profiles, used to recommend targeted university support programs.

### Energy Forecasting (Deep Learning)

Researched and implemented LSTM, RNN, and RBM+NN deep-learning models to forecast electricity demand and $CO_2$ emissions in the U.S. power sector. Collected hourly demand and emission data for California and Texas; engineered time-based, weather, and lag features. Conducted model comparison on MAE and RMSE metrics, achieving best results with an optimized LSTM (~5% better than RNN). Results are being prepared for academic publication—highlighting peak-demand forecasting improvements and decarbonization implications.

## 🎓 Education

- **MSc in Data Analytics**, London Metropolitan University (2024 – 2025)
- **B-Tech in Mechanical Automobile Engineering**, SCT College of Engineering (2017 – 2021)

## 📄 Resume

You can open the resume in a new tab.

## 📬 Contact


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