

# Mark Ustel

## Contact Me

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## Education

**Bachelor of Engineering**  
University of Hertfordshire  
2003 - 2006

## Skills

### Empathise

UX, Design Thinking, CX

### Data Acquisition

SQL, Hive, Hadoop, Web  
Scraping, APIs, Telematics

### Data Preparation

R, Python, Alteryx, Statistical,  
Explanatory Data Analysis

### Modelling

Regression, Image Recognition,  
Machine Learning, Natural  
Language Processing, Data Robot

### Evaluation

Hypothesis Testing, Probability  
Distribution, Correlation Matrix,  
Confusion Matrix

### Visualisation

Story Telling, Tableau,  
QlikView/Sense, Shiny

### Deployment

Markdown, Quarto, Google Cloud,  
GitHub, RStudio Connect

## Community Engagement

### STEM

An active STEM ambassador for  
several years, and have  
participated in Primary Engineer  
for the previous five years

### Volunteering

Hosted the Ho-Ho-Hospice event  
for the previous three years

Provide education and career via  
public speaking events through  
Future First

Passionate and inquisitive analytically minded **Data Scientist**, strongly believing in the infusion of Data Science with **Design Thinking**. Combining strengths from both approaches ensures focus on the customer and problem definition, whilst delivering a **creative** and highly **analytical** solution with tangible and quantifiable outcomes. An experienced user of both **R** and **Python**, having a strong bias towards **R** due to its superior statistical ability and interactive web apps in **Shiny**.



## Senior Data Scientist

### Ford - Connected Vehicles

October-'20 to present

- » Developed a statistical based webapp that prevented £1M in buy backs
- » Delivered analysis to identify and support a \$3M cost saving on a high performance vehicle
- » Scaled a dashboard from 10k vehicles to over 6M
- » Simplified an existing query and dashboard to aggregate all analytics, including regression modelling, server side which reduced the dataframe from over 650M to less than 3k
- » Spearheaded the cloud migration for query, analytics, machine learning and dashboarding

## Data Scientist

### Ford - Innovation Lab

April-'19 to October-'20

- » Improved project completion rate by 30%, and reduced project time by 2 months utilising Design Thinking methodologies
- » Conceptualized machine learning (PCA) to identified \$45M and delivered over \$6M cost saving
- » Formulated a natural language processing algorithm to analyse over 17k ideas generated
- » Redesigned the interface for idea generation which doubled the number of ideas submitted whilst greatly enhancing customer satisfaction
- » Analysed and published a dashboard for diesel injector prognosis worth an estimated \$2M

## Senior Data Analyst

### Ford - Engine Development

March-'16 to April-'19

- » Proud inventor and author of a patent for Adaptively Controlling a Motor Vehicle Engine System
- » The first person to test, analyse and implement dual injection strategy on a European application at Ford which yielded a 1% improvement in fuel economy and a 7% uplift in torque
- » Created a tool to analyse over-fuelling which enabled fuelling levels to be reduced by 12%
- » Utilising big data and developing algorithms helped successfully predict the hardware changes required to meet upcoming legislated C02 limits

## Data Analyst

### Ford - Engine Development

August-'11 to March-'16

- » Invented a program to analyse and categorise fuel consumption delta that is still being utilised globally
- » Successfully developed algorithms to identify dynamic valve events
- » Developed a software strategy to improve idle combustion stability by over 50%
- » Remotely investigated and resolved an assembly production error that caused the plant to stop for 10 days

## Systems Engineer Team Leader

### Delphi - Engine Testing

February-'08 to July-'11

- » PID tuning enabled operating systems to have four times the lifespan
- » Created post processed and real time automated data quality checks saving over £2M
- » Developed a script that automatically writes test procedures saving over £115k pa
- » Implemented DOE testing strategy which reduced optimisation on a single cylinder engine by 2 months
- » Installed, configured and maintained systems which yielded a 15% increase in uptime and a £10k cost saving
- » Created and hosted several training courses in statistics and analytics

## Technical Author

### Boeing - CAD Integration

September-'07 to February-'08

- » Instantiate parts in Enovia to ensure timely part procurement to reverse delays worth in excess of \$100M
- » Interpreting engineering drawings to amend a variety of aircraft documentation
- » Authoring technical publications using FrameMaker

