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**RAC Foundation**

**Environment/Mobility - Topic Project Brief (2020-21)**

**RAC Foundation Advisor for MSc Student:**

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| Ivo Wengraf  Research & Data Manager | Email: ivo.wengraf@racfoundation.org |

**RAC Foundation background:**

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| The RAC Foundation is a transport policy and research organization which explores the economic, mobility, safety and environmental issues relating to roads and their users. The Foundation publishes independent and authoritative research with which it promotes informed debate and advocates policy in the interest of the responsible motorist. |

**Project title (welcome rewording):**

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| Analysis of the MOT database - what can we learn from the UK’s changing parc and associated spatial trends? |

**Project description:**

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| The MOT is an annual test of vehicle safety, road worthiness and exhaust emissions that is required when you own a car that is 3 years or older in Great Britain. Through the DVSA MOT history API we are able to access MOT test history information for all vehicles in GB going back till 2005/6. Some examples of how the RAC Foundation has used this information in the past can be found in various published pieces including: [MOToring along](https://www.racfoundation.org/wp-content/uploads/2017/11/MOToring_along_Dr_Sally_Cairns_et_al_November2017.pdf), [New car mileage](https://www.racfoundation.org/research/mobility/new-car-mileage), and [the impact of introducing E10 petrol](https://www.racfoundation.org/wp-content/uploads/The_impact_of_E10_final_Wengraf_July_2018.pdf).  **Project could examine:**   * EV take up and changes to the parc\* (could be spatial changes as well) * Plugging in the plug-in hybrid - are drivers making the most of their hybrid or plug in vehicles? * How long does the modern car really last in the parc? (again could be spatial, where are cars – petrol, diesel, hybrid, turning over more quickly) * How quickly (and where) are cars failing their MOT? What can we learn from this?   *We welcome students’ interpretations of the topic and suggestions to further specify it.*  **Sources would include:**   * The DVLA vehicle registration database of vehicles registered for UK use. Variables might include:   + Make   + Model   + Area of registration, etc. * MOT database, the following variable are accessible from the API for every vehicle:   + Make   + Model   + First used date   + Fuel Type   + Primary colour   + Vehicle ID   + Registration Date   + Manufacture Date   + Engine Size   + Completed Date   + Test Result   + Odometer Value   + Odometer Unit   + MOT Test Number\*\*   + Odometer Result Type   + Reason for Failure and other comments   \* The parc refers to the group of vehicles that are in use within a country at a given time.  \*\*This number can be matched to the MOT test centre where the car underwent its MOT, giving it a spatial aspect. However, it’s important to keep in mind that people don’t always get their car MOT’ed near where they live. The nuances of the data will be explained. |

**Deliverables:**

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| * Dissertation in full * Executive summary for policy and practitioner audience (with possible scope for media release) * Access and sharing of code on RACF GitHub |