Project 1 Interim Presentation

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Outline

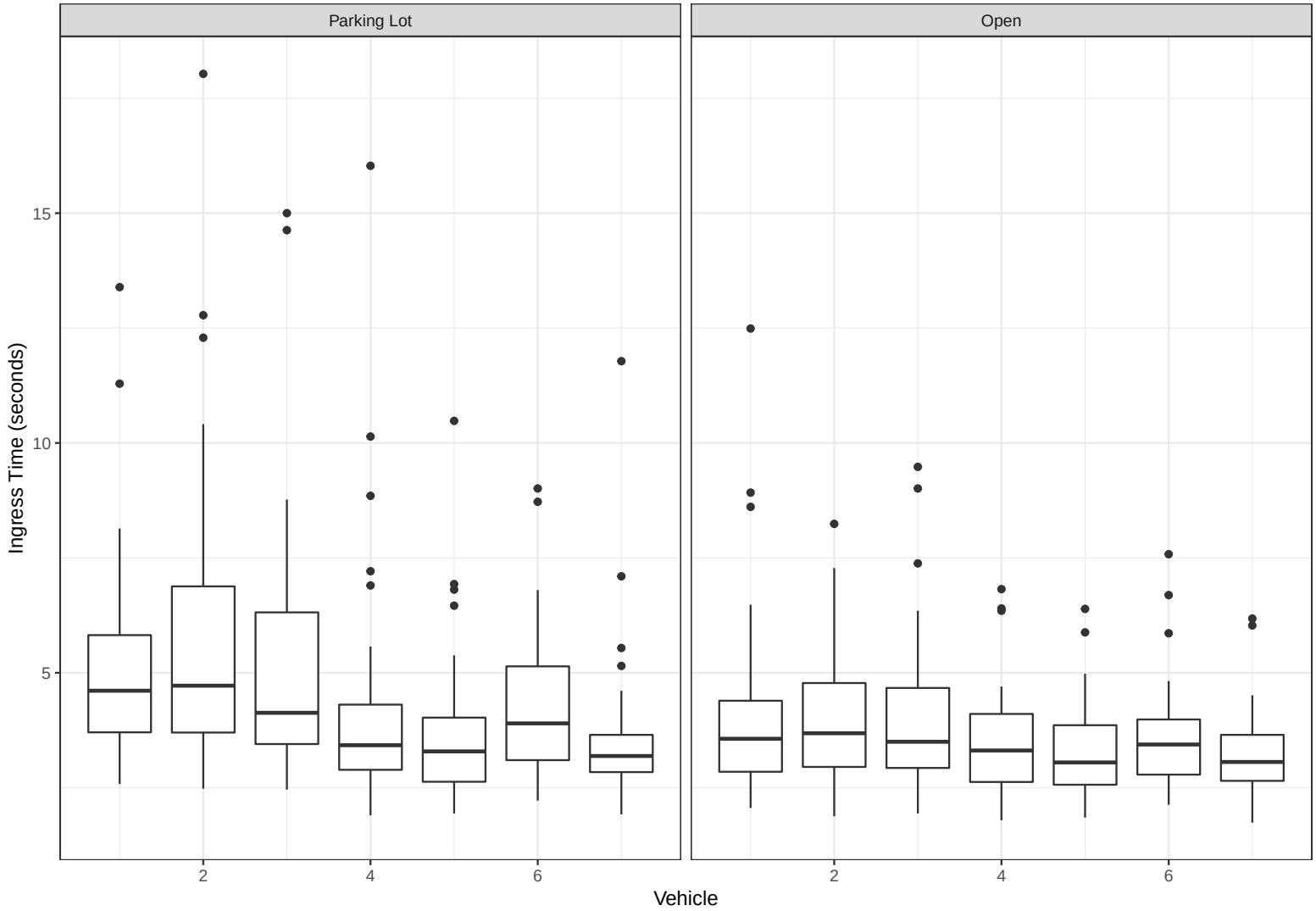
- Background
- Exploratory Data Analysis
- Main Aims
- Future Work

Background

- With an aging population, it is becoming increasingly important for motor vehicle manufacturers to design vehicles with the interests of the elderly in mind.
- One particular issue the elderly face, that many of us take for granted, is simply getting in and out of the vehicle.
- Dr. Galecki provided two specific aims for us to answer (which we all know and I will go through later), but I also wanted to focus my analysis towards results we can implement.
- Yes, it's important to understand how age, physical capacities, mobility, and cognition affect ingress/egress performance, but **how can we help engineers design vehicles that will have the most impact on the ease of entering and leaving a vehicle?**

Exploratory Data Analysis

Ingress Times between Vehicles and Door Positions



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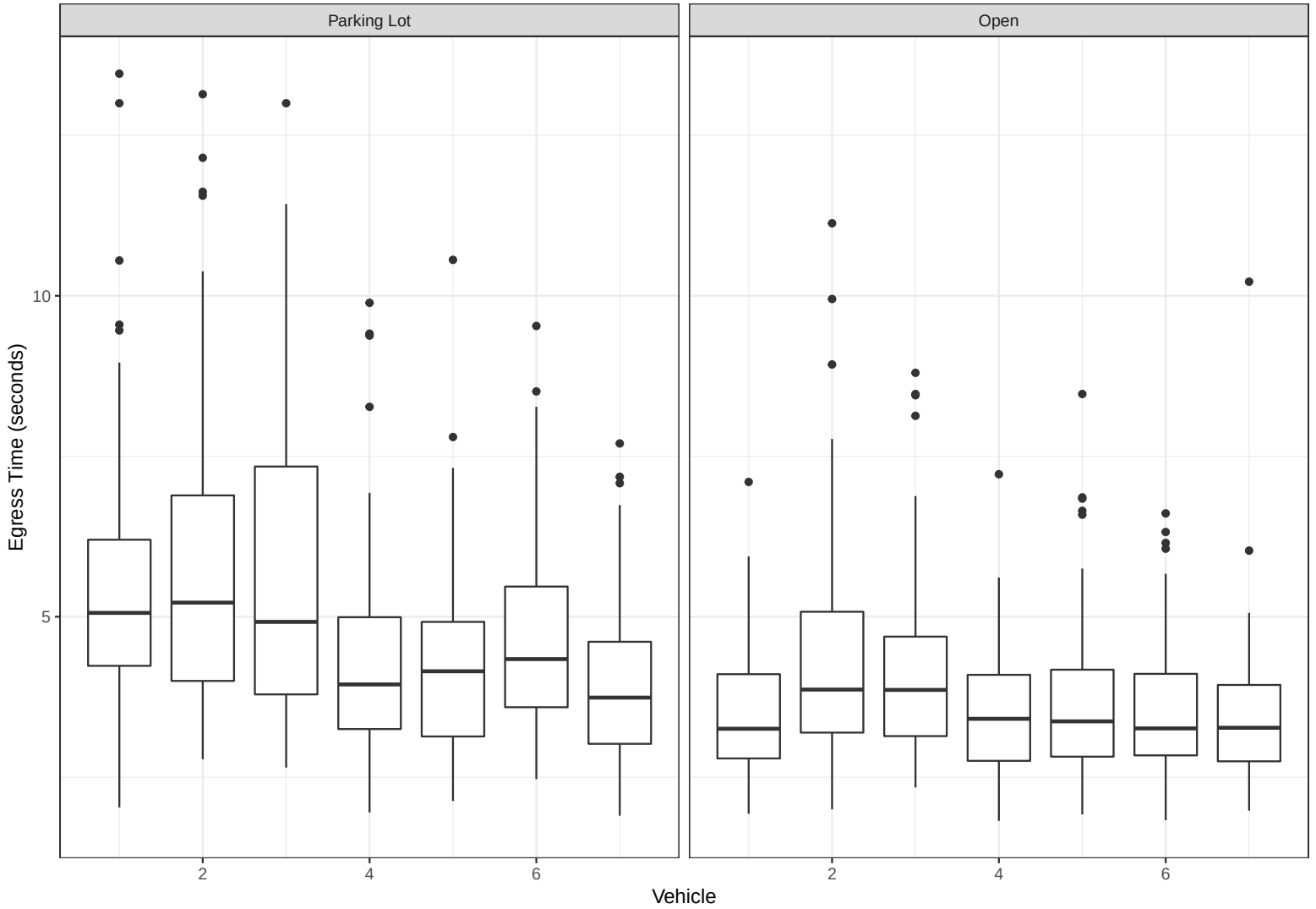
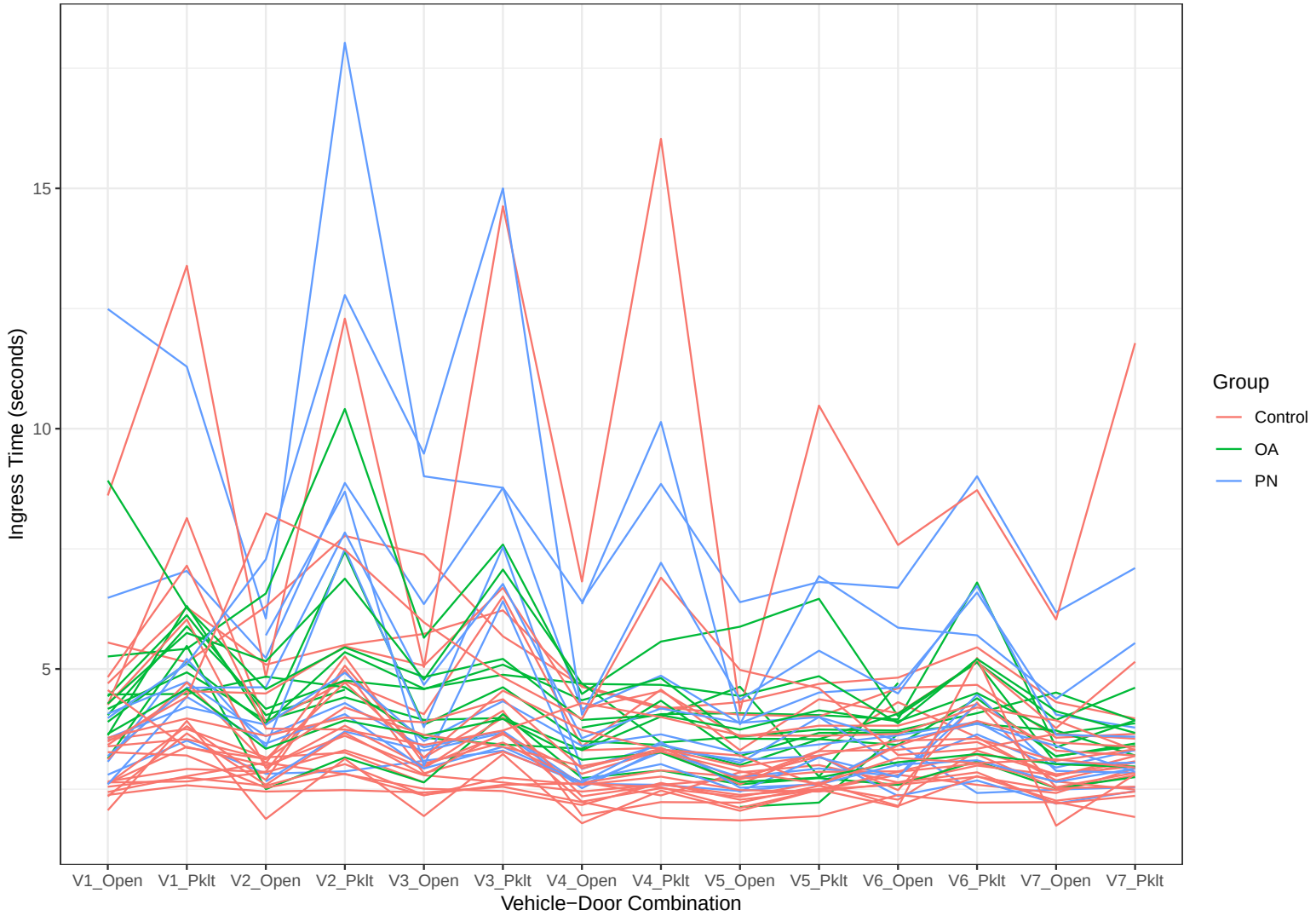


Ingress Times by Subject



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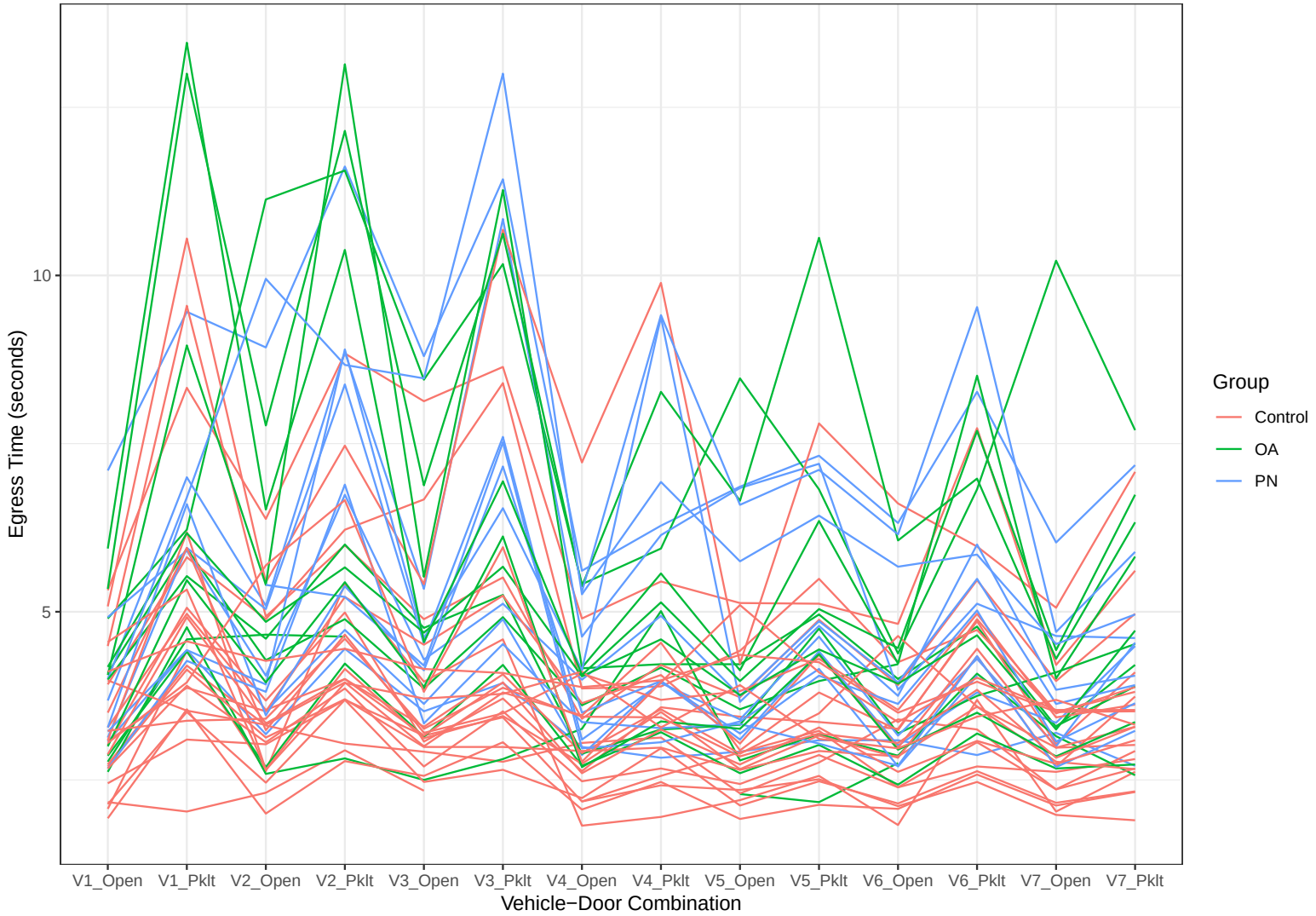

EDA Summary

- Vehicle #2 appears to be one the most difficult vehicles to get in and out of, while Vehicle #7 appears to be one of the easiest vehicles to get in and out of. *What makes these two vehicles different?*
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Main Aims

Aim #1

Does egress (ingress) strategy affect driver egress (ingress) time in the elderly?

Do mobility impairments affect driver egress (ingress) time in the elderly?

Aim #2

Identify the human capacities that best explain the variation in egress (ingress) time between drivers.

Future Work

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Questions???