# Task 05: Descriptive Stats - ChatGPT vs. Notebook Comparison

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| --- | --- | --- | --- | --- |
| **Q#** | **What Was Asked** | **My Chat Answer** | **Notebook Answer** | **Accuracy** |
| 1 | Avg. grid‑positions gained (2024) | Drv 860 – +2.33 | Drv 815 (S. Pérez) – +3.75 | ✗ |
| 2 | Most consistent pit‑stop team (σ < 5 s) | unknown | McLaren (σ = 3.565 s) | ✗ |
| 3 | Highest overtake‑rate circuit (2024) | unknown | Las Vegas GP – 2.54 ov/lap | ✗ |
| 4 | Biggest single‑lap improvement | Zhou Guanyu, lap 2 MON, –2 414 122 ms | Daniel Ricciardo, lap 12 CAN, –2 990 ms | ✗ |
| 5 | Largest points swing between races | Drv 830 & 846, +26 pts | Max Verstappen, +33 pts | ✗ |
| 6 | Points per pit‑stop‑sec efficiency | unknown | Ferrari – 8.20 pts/s | ✗ |
| 7 | Linear model on pit‑stop time | R² = 0.098; top coeffs {210, 3, 117} | R² = 0.0192; coeffs differ | ✗ |
| 8 | Fast‑lap‑rate leader (2020‑24) | Drv 830, 0.243 | Drv 830, 0.269 | △ |
| 9 | Team‑mate qualifying duel (2024) | RBR – 830 vs 815 = 6.42 | RBR – 6.58 | ✓ |
| 10 | YoY pts‑per‑race gain (’23→’24) | McLaren +14.02 (+102 %) | McLaren +14.02 (+102 %) | ✓ |

## Error Analysis

**Q1:** Mis‑merged grid vs. finish data; DNS/DNF filter error.

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AI-generated content may be incorrect.

**Q2 & Q3:** Aggregations not executed during live chat; notebook completed them.

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**Q4:** Used cumulative, not lap‑to‑lap, deltas → huge negative value.

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**Q5:** Incorrect race‑pairing logic; sprint‑bonus handling missing.

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**Q6:** Metric never computed in chat.

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**Q7:** Different stop filters & constructor encoding → inflated R².

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**Q8:** Correct driver but denominator (races entered) mis‑counted.

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**Q9 & Q10:** Match notebook aside from minor rounding (Q9).

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