

Ibrahim Reda Wasfy

Automotive & Design Engineer | Fresh Graduate

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El-Obour, Cairo, Egypt Military Service Exempted Egyptian Driving License

PROFILE

Automotive Engineer with end-to-end vehicle development experience across **four competition builds** — spanning engineering calculations, CAD design, simulation, manufacturing, assembly, and testing. Demonstrated leadership as **Team Leader** of Helwan Formula Student (HFS) and **Head of Vehicle Dynamics** at Helwan Racing Team (E-Rally), directing multidisciplinary subteams and managing full project lifecycles from concept through competition. Backed by **six industry internships** across OEM, commercial vehicle manufacturing, and premium vehicle service. Seeking an engineering role to apply my competition-tested, hands-on automotive development experience as a detail-oriented, motivated engineer eager to grow in real-world automotive and motorsport opportunities.

EDUCATION

Bachelor of Automotive Engineering, *Capital (Helwan) University - Mataria Branch* 09/2021 – 06/2026
Relevant Coursework

Secondary School, *El Safwa Language School* 09/2014 – 06/2021
Obour, Cairo, Egypt

EXPERIENCE

Helwan Formula Student (HFS) Racing Team

Team Leader

06/2025 – Present
Cairo, EGY

- Led a multidisciplinary team of 10 engineers across vehicle dynamics, powertrain, aerodynamics, and chassis to develop a Formula Student for FSUK competition.
- Managed project timeline and milestone planning to meet FSUK deadlines.
- Represented the team in sponsor and industry communications.

Vehicle Dynamics

09/2025 – Present
Cairo, EGY

- Directed vehicle dynamics development encompassing steering geometry design and Ackermann optimization, simulating steering block geometry in SolidWorks to validate turn-in response and low-speed maneuverability.
- Designed a rack-and-pinion steering system from scratch, including steering arm integration into the upright, while validating geometry and packaging constraints.

Lap Time Simulation (LTS) Engineer

04/2026 – 06/2026
Cairo, EGY

- Developed structured test plans using Excel for data collection, performance tracking, and result comparison across iterative CarMaker lap-time simulation runs.

Helwan Racing Team (E-Rally)

Head of Vehicle Dynamics

03/2025 – 01/2026
Cairo, EGY

- Led the Vehicle Dynamics department, setting technical direction, managing budget and timelines, and overseeing manufacturing execution through to assembly.
- Improved performance through iterative design revisions based on previous testing data.
- Mentored juniors in vehicle dynamics, ensuring knowledge continuity.

Vehicle Dynamics Vice Head

09/2024 – 03/2025
Cairo, EGY

- Mechanical design, calculations, and engineering BOM & DBR for Urban and Prototype, building both from scratch.
- Oversaw the full manufacturing lifecycle from technical drawings through production, assembly, and testing, ensuring design specifications were maintained.
- Recruited, trained, and onboarded new members into the team.

Vehicle Dynamics Member

07/2023 – 09/2024
Cairo, EGY

- Performed full steering and brake system calculations for a 256 kg urban EV, defining geometry and pedal ratios to meet EVER competition technical requirements.
- Authored the Vehicle Dynamics Design Report for EVER competition submission.

Revitup Drifting Competition, Motorsport Organizer

12/2022 – 09/2024
Cairo, EGY

- Set up competition track layout on-site
- Enforced safety protocols for drivers, vehicles, spectators, and facilities, managing on-site incident response and damage assessment

PROJECTS

- Formula Student One-Seater Racing Car** [🔗](#), *Formula Student UK* 07/2025 – 07/2026
- Designed and optimized the steering system, including geometry and system components.
 - Developed and validated rack-and-pinion steering assemblies using CAD.
 - Performed design iterations to improve steering response, effort, and packaging constraints.
- Tools Used: Microsoft Excel - SolidWorks - MATLAB - Simulink - Optimum Kinematics*
- Gasoline Urban Car** [🔗](#), *Shell Eco-marathon Qatar* 07/2024 – 10/2025
- Designed, manufactured, and tested from concept to competition, following a full (Calculation - Design - Manufacturing - Testing) for participating at SEM 2025
- Tools Used: Microsoft Excel - SolidWorks*
- Electric Prototype Car** [🔗](#), *Shell Eco-marathon Qatar* 07/2024 – 10/2025
- Designed, manufactured, assembled, and tested in parallel with the Gasoline Urban Car for Shell Eco-Marathon competition entry
- Tools Used: Microsoft Excel - SolidWorks*
- Electric Urban Car** [🔗](#), *EVER Egypt* 07/2023 – 07/2024
- Built from scratch passing by different stages mainly: (Calculation - Design - Manufacturing - Assembly - Testing), to participate at EVER Egypt

SELECTED INTERNSHIPS

- Ezz-Elarab Automotive Group** [🔗](#), *Engineer Intern* 09/2024
- Completed automotive engineering training covering vehicle systems, technical coursework, and new model induction sessions for the all new Jeep Grand Cherokee. 6th of Oct, Al Jizah, Egy
- MCV - Manufacturing Commercial Vehicles** [🔗](#), *Workshop Engineer Intern* 08/2024
- Gained hands-on exposure to commercial vehicle manufacturing across Buses, Trucks, and Vans departments, observing engine overhaul operations El Obour, Al Qalyubiyah, Egy
- ESOTICA Service Centre** [🔗](#), *Workshop Engineer Intern* 07/2024
- Assisted in diagnosing and resolving a timing system fault on a McLaren 570S. Industrial zone, New Cairo, Egy
 - Supported workshop service operations for high-performance vehicles
- MTI Jaguar Land Rover Egypt** [🔗](#), *Workshop Engineer Intern* 06/2024
- Completed Pre-Delivery Inspection (PDI) procedures and test plan documentation for Range Rover and Jaguar model lines El Obour, Al Qalyubiyah, Egy

ACHIEVEMENTS

- Shell - Eco marathon** [🔗](#), *Doha, Qatar* 01/2026
- 6th & 15th Place in Urban Gasoline and electric Prototype Categories **2026**
 - Passed technical inspection For both Urban Gasoline and electric Prototype Cars **2025**
- EVER Egypt** [🔗](#), *North Coast, Egypt* 08/2024
- 1st Place (Overall Dynamic Track, Design, Cost)

ORGANISATIONS

- Automobile and Touring Club Egypt (ATCE)** [🔗](#), *Time Keeper* 04/2026 – Present
- Operated official FIA timing systems to record lap times across competitive categories and coordinate with race control to ensure accurate results and regulatory compliance. Cairo, Egypt

COURSES AND CERTIFICATIONS

- SolidWorks:** CSWA, CSWP (in progress) • **Matlab:** Fundamentals • **FIA:** Soft Skills Development • **HP Academy:** Motorsport Fabrication Fundamentals, Wiring Fundamentals

TECHNICAL SKILLS

Mechanical Design • CAD • DFM • FEA • SolidWorks • MATLAB • Simulink • AutoCAD • GD&T • Vehicle Dynamics • Optimum Kinematics • Technical Report • BOM • Root Cause Analysis • Excel Sheets

SOFT SKILLS

Team leadership • Team Work • Multi-tasking • Negotiation • Project Management • Report writing

LANGUAGES

Arabic: (Native) • **English:** (Full professional proficiency) • **French:** (Beginner) • **German:** (Beginner)