Zhansar Zhaparov

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EDUCATION

Case Western Reserve University, Cleveland, OH **Aug 2024 – Present**

B.S. Mechanical & Aerospace Engineering | **GPA:** 3.88/4.00

National School of Physics and Math, Kazakhstan **Sep 2019 – Jun 2024**

GPA: 5.0/5.0

PROFESSIONAL EXPERIENCE

CWRU Motorsports, Cleveland, OH

Suspension and manufacturing engineer **Aug 2024 - Present**

Season 2026:

- Designed rear suspension geometry in SolidWorks, optimizing camber, toe, and roll center behavior across wheel travel
- Designed and conducted the finite-element analysis in ANSYS on the rear suspension arm; decreased the arm weight by 5-10% by integrating lighter and stronger material
- Coordinated with frame and drivetrain subteams to ensure SAE regulation compliance and clearances

Season 2025:

- Manufactured and weld-prepped frame mounting tabs, firewall, etc. on a waterjet, accelerating production and contributing to the fastest frame completion in team history
- Manufactured car details on the mill, drill, lathe, etc., ensuring parts were within tolerances and had proper surface finish

Kazikan Motors (startup), Astana, Kazakhstan

Design Engineer **Apr 2024 - Aug 2024**

- Designed and validated kart pedals and seat mounts in SolidWorks based on preferred karting driver ergonomics
- Contacted sponsors and created presentations describing technical aspects
- Standardized bill of materials in Excel to streamline accounting and progress tracking

Kisley Lab Undergrad Researcher, Cleveland, OH **Jan 2025 - Present**

Research Assistant

- Received $4,000 SOURCE funding to lead a summer research project investigating corrosion mechanisms in 3D-printed 304/316L stainless steel
- Accepted into the Swagelok Center for Surface Analysis of Materials (SCSAM) Fellowship; awarded $1,220 for Scanning Electron Microscopy/Energy Dispersive X-ray Spectroscopy
- Modeled, fabricated, and polished AM stainless steel samples on the LPBF 3D printer for corrosion testing
- Analyzed spectroscopic data using Origin to visualize trends in passive film behavior

Lumiere Education, Cambridge, MA

Research scholar **Jun 2023 - Sep 2023**

- Published a peer-reviewed paper in JHSS on a comprehensive synthesis of individual design and material elements of piezoelectric transducers in such a way that enables future research to expand and build upon nuanced relationships between these parameters

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PROFICIENCIES

Languages: English (C2), Kazakh (native) , Russian (native)

Technical Skills:

Software: SolidWorks, Siemens NX, Matlab, Origin, MS Office, Blender 3D

Programming: Java, Matlab