Huzaifa Khan

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Education

Oregon State University — Corvallis, OR
BS in Computer Science — *Expected Grad: 2026*

University of Waterloo — Waterloo, ON
BASc in Mechanical Engineering — *Grad: 2020*

Experience

Lucid Motors — Mar. 2024 – Present
Sr. Design Engineer, Craftsmanship — *Newark, CA*

- Designed key exterior interfaces with class-leading fit and finish targets for the new Lucid Mid-Size vehicle.
- Led benchmarking studies to define gap, flush, and haptic specs on exterior trims. Led design reviews with cross-functional teams to ensure all Build Objectives were achievable.
- Proposed alternative materials, surfaces, cutlines, and interfaces to improve perceived quality for A-surface.

Dräxlmaier — Oct. 2021 – Feb. 2024
Lead Design Engineer — *Livermore, CA*

- Managed launch of new interior products from concept to high-volume production; performed CAD DFMA studies, led cross-functional design reviews, and attended onsite builds for successful design release.
- Worked with Test and Reliability teams to design and validate all functional and non-functional requirements.
- Root-caused fit and finish issues, implementing countermeasures through reworks and tooling design changes.

Tesla — Oct. 2020 – Jun. 2021
Mechanical Design Engineer — *Fremont, CA*

- Successfully managed the launch of Model S interior parts during prototype phase through SOP release. Attended onsite builds and root-caused issues pertaining to assembly, haptics, gap, and flushness.
- Identified and root-caused manufacturing issues for injection molded parts and developed cost-effective reworks.
- Performed CAD studies, tolerance analysis, E-Cube builds and led offline trials for successful release of parts

Voyage Labs — Sep. 2019 – Dec. 2019
Mechatronics Engineer Intern — *Waterloo, ON*

- Developed an automated system for testing THC sensors using a 3-axis liquid-handling robot. Created python scripts to execute test protocols and reduce cycle time by 66%.
- Designed and fabricated prototypes of a mechanical test fixture and PCBA. Optimized using FEA in Solidworks.

Tesla — May 2018 – May 2019
Mechanical Engineer Intern — *Fremont, CA*

- Root-caused the primary source of scrap rate in Battery Module process by analyzing data from manufacturing line and quality log. Implemented corrective actions to reduce OpEx costs by $1.5MM.
- Analyzed large data sets using statistical methods to provide feedback from manufacturing trials and help drive continuous improvement initiatives. Validated +20 production changes for Model S/X powertrain.
- Developed a service tool to swap faulty energy modules in Megapack, under safety, packaging and cost constraints.

Projects

Blitz | *SolidWorks, 3D Printing, Machining, Arduino, Breadboarding and Soldering* — Jan. 2019 – Apr. 2020

- Developed an autonomous EV charging robotic arm as a solution for charging robo-taxis, for Capstone Project.
- Responsible for developing the electrical design; sourcing motors, compatible drivers, and power supply, based on design requirements such as expected joint load, robot degrees of freedom, etc.
- Awarded **General Motors Innovation Award**, **ASME Northern Alberta Design Challenge Award**, and **University of Waterloo Engineer of the Future Fund**.

Technical Skills

Mechanical Design: CATIA, SolidWorks, fixture design, DFMA, GD&T, BOM management
Engineering Tools: Finite element analysis, data analysis in Python and MATLAB, Git, PyCharm, VS Code, Jira
Prototyping: Arduino, bread-boarding, machining, 3D printing SLA and FDM parts, laser cutting, fixturing
Theory: Plastic Injection Molding, Mechanics, Materials, Fatigue and Fracture