Khandaker Aqib

(678) 933-7627 • aqibhandaker@gmail.com • https://www.linkedin.com/in/khandakeraqib

EDUCATION

STANFORD UNIVERSITY — **Stanford, California**
B.S. in Mechanical Engineering (Product Realization) and minor in Computer Science — *Sep 2021 - Jun 2026*

WORK EXPERIENCE

VOLKSWAGEN — **Stanford, California**
Senior Capstone Design Engineer — *Sep 2024 - May 2025*

- Led 0-1 design of a modular, accessible ID Buzz lift under tight deadlines using Gantt charts, FMEA, and task plans
- Iterated and measured lift solutions following team-constructed engineering requirements
- Performed calculations on loads, hinges, and dynamic door movements to ensure functional integrity
- Designed, built, and reinforced door-to-hinge attachments using steel and composite materials.
- Constructed door frame with extruded T-slots, constrained door sliders, and a locking latch
- Developed CAD assemblies to guide construction of testable accessibility solutions and electronics integration
- Resolved linear actuator contact reliability issues using iterative 3D printed prototypes

STANFORD SOLAR CAR — **Stanford, California**
Mechanical Engineer — *Jun 2023 - Apr 2025*

- Modeled and integrated a latch-tension system, enabling one-handed operation to open/close a 150-lb car top shell
- Designed and assembled fiberglass nomex battery pack (112 V) enclosure and precisely fastened routed cells
- Calculated precise heat sink needs and adapted integration with motors/management system using heatlines
- Coordinated carbon-fiber drilling and sealing of top shell to install and validate solar array efficiency

ZAINAR INC. — **Belmont, California**
Mechanical Engineering Intern — *Jun 2024 - Sep 2024*

- Constructed and optimized 3D maps used for customer asset tracking at four 215,000+ ft^2 sites
- Executed tests for detecting asset presence accounting for wifi interference and reported 250 data points
- Overhauled robot algorithms and configured network to move robots at regular intervals to report tracker accuracy
- Developed CAD models for waterproofing in tracking hardware, integrating minimal chip and battery changes

TERRAJOULE ENERGY INC. — **Palo Alto, California**
Mechanical Engineering Intern — *Jun 2022 - Sep 2022*

- Performed solar energy storage efficiency analysis and compared to lithium-ion battery systems
- Planned carnot cycle efficiency methods for steam storage units by upgrading turbines and cooling inlet air
- Implemented and interpreted carbon-payback modeling programs for the next 5-10 years of plant operating life

NANNIS & ASSOCIATES, INC. — **Buford, Georgia**
Structural Engineering Intern — *Dec 2020 - Jun 2021*

- Analyzed and built structural designs for malls and apartments using Revit & Risa 3D
- Diagnosed excessive load and stress issues in building designs using computation and presented resolution reports
- Collaborated with principal engineers to certify building design's alignment with safety regulations for live loads

PROJECTS

HAWAII WIND FARM STUDY — **Stanford, California**
Computational Analysis Final Project Researcher — *Apr 2024 - Jun 2024*

- Evaluated the effectiveness of wind farm placements using CFD optimizing for max power and least disturbance
- Derived critical freestream pattern developments using repetitive optimization simulation testing and programming
- Consolidated unexpected results including air stream amplification around wind farms and formulated justifications

SUSTAINABLE COMMERCIAL AIRLINER OPTIMIZATION — **Stanford, California**
Lead Aerodynamics and Design Researcher — *Sep 2022 - Dec 2022*

- Computed composition, fuel efficiency, wing and engine design effects on CO2 emissions for commercial airliners
- Evaluated and remodeled efficient wing designs for variable capacity and ranged airplanes
- Facilitated group research synthesis and calculations to blueprint optimal airplane design

SKILLS

- **Technical:** Fusion 360, ANSYS, Blender, FEA, NO, CFD, Python, C++, C, Assembly Code, Generative Design, AWS, Wifi systems, CNC