

Thanh Tran

Portfolio: thanhvtran.com | linkedin.com/in/thanh-tran-vt | trant707116@gmail.com

Seeking a mechanical design engineering full time position starting in Jan 2023.

Education

UNIVERSITY OF WASHINGTON, Seattle, WA
B.S Mechanical Engineering, Senior

Expected graduation: Dec 2022
GPA: 3.9/4.0

Work Experience

APPLE | *iPhone Product Design Engineering Intern* *Sept 2021 – Sept 2022*

- Designed in NX and built a robust fixture platform for testing small antenna components integrated on PCBs.
- Built Monte Carlo statistical analysis models in JMP and Excel to correct flatness issues of a large component.
- Familiar with critical processes such as CNC, injection molding, stamping, anodizing, EDM, and adhesives.
- Engaged oversea suppliers with designs, DFM/DFA, build, and FA for a large-scale reliability test.
- Utilized failure analysis including CT, SEM, FTIR, and sectioning to root cause issues in iPhone development.
- Drove the design, tooling, and assembly fixtures development for custom functional prototypes.

SPACE X | *Starship Mechanical Engineering Intern* *June 2021 – Sept 2021*

- Designed factory tooling to accelerate Starship rocket prototype builds, specializing in steel structures.
- Responsible for designing laser-cut parts in NX with DFM and managing the manufacturing supply chain.
- Owned sensors development and installation on the vehicle and drive to completion with a tight schedule.

UW MACHINE SHOP | *Student Shopmaster* *Nov 2019 – June 2021*

- Trained new students on using machines and inspection equipment safely for their technical projects.
- Maintained and upgraded machines in the shop (CNC mills, lathes, grinders, waterjet, laser cutter, 3D printers).

BLUE ORIGIN | *Manufacturing Engineering Intern* *Sept 2020 – Dec 2020*

- Conducted statistical tolerance analysis in 3DCS for New Glenn carbon fiber panel installations.
- Designed tooling fixture in CATIA for panel installation with emphasis on cost, strength, and manufacturability.

TESLA | *Product Design Integration Intern* *Mar 2020 – Sept 2020*

- Performed tolerance stack-up analysis with 3DCS to solve assembly issues for the car body and battery.
- Collaborated with 7 overseas suppliers for DFM of injection molded, stamped, casted, and machined parts.
- Redesigned 10 machining, welding, and testing fixtures in CATIA V5.
- Published 36 GD&T drawings for large stamped and CNC body structure components for the Models S/X Plaid.

BOEING | *Structures Engineering Intern* *June 2019 – Sept 2019*

- Designed a case-hardened sector gear for a wing actuator, reducing 15% of original part weight.
 - Performed FEA in Abaqus to validate beam theory calculations when predicting gear failure.
-

Projects

UW FORMULA SAE | *Drivetrain Mechanical Design Engineer* *Oct 2020 – June 2021*

- Designed and prototyped a dynamometer to test the motor torque for the all-electric Formula-style racecar.
- Redesigned the sun, planetary, and ring gears for high-precision wire EDM process to maximize performance.
- Designed the anodized aluminum uprights by optimizing strength and stiffness with SolidWorks and ANSYS.

PLASTIC INJECTION MOLD | *Designer – Personal Project* *Mar 2021 – Apr 2021*

- Designed an injection mold unit to mass manufacture a medicine bottle cap.
- Incorporated complex mechanisms such as a collapsible core and side-action cams to mold plastic threads.

HUSKY ROBOTICS CLUB | *Manufacturing Lead* *May 2019 – Apr 2020*

- Managed a team of 15 student engineers to manufacture 120+ metal parts in 12 weeks.
- CNC machined parts to achieve 5X improvement in tolerances achieved (from $\pm 0.005''$ to $\pm 0.001''$).