

# Jacob Villani

480-316-8270 • Phoenix, AZ • jacobvillani@gmail.com

## EXPERIENCE

---

### Industrial Engineering Intern

May 2022 - August 2022

Lucid Motors | Casa Grande, AZ | Manufacturing the world's most technologically advanced luxury electric vehicles

- Conducted process diagnostics with team leads to identify and prioritize 5s and continuous improvement projects
- Implemented standard procedures for all Body-In-White (BIW) robotic joining lines
- Work with manufacturing to design error proofing fixtures and procedures to reduce operator errors by 3%
- Performed line balancing within BIW and assembly lines to reduce cycle time by 5%
- Optimized BIW lines to eliminate bottlenecks while validating cycle times to ensure operations are under takt time
- Collaborated with multidisciplinary teams to solve quality issues using PDCA

### Manufacturing Engineering Intern

May 2019 - August 2019

Foresight Technologies | Tempe, AZ | Manufactures critical aerospace and semiconductor machined parts and assemblies

- Created 100+ Operations Method Sheets for operators to understand how to assemble products properly
- Updated CNC programs with G10 offset code, allowing CNCs to run with proper tool and fixture offsets
- Designed fixtures for CNC and 5 axis mill machines in SolidWorks
- Interacted with suppliers and manufacturers to receive quotes on orders
- Worked with production operators to solve quality and lead time issues in manufacturing
- Implemented formulas and methods in excel to ensure inventory for manufacturing teams was accurate at all times

### Automotive Parts Warehouse Lead

2017-2019

Earnhardt Jeep, Dodge, Ram Dealership | Gilbert, AZ | Top 50 auto dealership in USA with over \$150M annual revenue

- Worked with team to manage multi-million dollar spare parts inventory
- Run annual report with minimal inventory errors each year

### Team Experience

SAE Aero Team | Northern Arizona University

August 2021-December 2021

- Designed a fully functional and safe Remote Control aircraft for competition
- Led team in propulsion of aircraft, designing propellor and selecting motor
- Used flow simulations to analyze model of aircraft for aerodynamics

Robotics Experience | Northern Arizona University

January 2022- Present

- Reverse engineering of robot and reduce cost of prototype by 600%
- Work with capstone team to create a full functional model

### Personal Experience

2015 - Present

- Regularly repair and restore vehicles
- Rebuilt entire Jeep Wrangler TJ in garage, including fabrication of parts
- Electrical experience wiring shed with 220v outlet
- Repair household appliances

## EDUCATION

---

Northern Arizona University | Bachelor of Science in Mechanical Engineering

Expected Graduation Dec. 2022

- GPA: 3.0
- Member of ASME
- Member of Honors Society

Chandler-Gilbert Community College | Associate of Science

August 2017-December 2019

- Worked a full-time job while going to school, earning an associate's degree

## SKILLS

---

SolidWorks | AutoCAD | Matlab | ANSYS | Catia | C++ | G-code | Six Sigma | 3D-printing | Excel | Lean Manufacturing |