

Teodorico Nicolau (Teo)

19562 Tuba St. Northridge, CA, 91324 | teodorico.nicolau@gmail.com | (512) 373-5590

Education

- CALIFORNIA STATE UNIVERSITY NORTHRIDGE (CSUN) | Northridge, CA** **Aug 2018 – May 2023**
Bachelor of Science in Mechanical Engineering. GPA 3.3
- UNIVERSITY OF HULL | Hull, UK** **Oct 2019 - May 2020**
Study abroad coursework in Mechanical Engineering and design.

Projects

- Gasoline to Diesel Engine Swap (Personal)** **Aug 2017 – July 2018**
- Fabricated a Cummins R2.3 engine into a 1990 Toyota 4Runner.
 - Completed Suspension fabrication from independent suspension to solid front axle.
 - Rebuilt and upgraded a 4L60E transmission and adapted onto Cummins engine.
- Turbofan engine parametric analysis for a Commercial Passenger | CSUN** **March 2022– May 2022**
- Performed hand calculation to determine engine thrust performance during cruise conditions.
 - Assembled hand-made MATLAB codes to determine engine performance with varying bypass and compressor pressure ratio, and compared to results found in Parametric Cycle Analysis program (Para).
- Voron 2.4 3D Printer | Personal** **June 2022 – July 2022**
- Sourced and assembled each piece of an open-source 3D printer.
 - Configured Klipper firmware and Octoprint software code to match the Voron printer.

Experience

- Matador Motorsports Formula SAE | CSUN** **June 2022 – Present**
Suspension Team Lead
- Simulated various suspension systems through OptimumLap, Optimum Kinematics, and Siemens Amesim to produce a competition worthy Formula style internal combustion vehicle.
 - Designed decoupled damper/spring assembly to isolate tuning for roll and heave suspension motions.
- UNITED STATES AIR FORCE** **March 2015 - August 2018**
Mechanical Technician **Joint Base Elmendorf-Richardson, Anchorage, AK**
(Active Duty)
- Performed scheduled/unscheduled and major maintenance on a snow removal fleet of 950 flight line tractors and general-purpose vehicles valued at \$170 million.
 - Diagnosed major malfunctions by the use of visual and auditory examination or through the use of specialized equipment.
 - Performed maintenance on 24 Airport Rescue and Fire-Fighting (ARFF) vehicles and structural fire engine/trucks valued at \$10.23 million.
 - Spearheaded a three-man team to perform scheduled maintenance to meet National Fire Protection Association (NFPA) safety standards.

Leadership & Activities

- UNITED STATES AIR FORCE** **Anchorage, AK**
Trainer **May 2016 - August 2018**
- Supervised/trained oncoming Airmen on mechanical skills and demonstrated repair procedures on heavy equipment fleets.
- CSUN Formula SAE Team** **Northridge, CA**
Suspension Volunteer/Intern **Nov 2021 – June 2022**
- Assisted senior members of the Formula SAE suspension team. (CAD, MATLAB, manufacturing, etc.)
 - Designed and fabricated fixtures and parts for both the suspension and Aero sub-teams.
- Bioinspired Mechanics** **California State University Northridge, CA**
Undergraduate Research member **Jan 2022 – May 2023**
- Created math models and experimental setup in Bioinspired Fibrillar Dry Adhesives.
 - Drafted and manufactured tensile testing platform for an array of Bioinspired fibril adhesives.

Skills | Relevant Coursework

Technical: SolidWorks CAD, FEA, and VBA/MATLAB programs, Thermodynamics & Heat Transfer, Fluid/Solid Mechanics, Numerical Analysis, Aerospace Propulsion, Fusion 360, Basic machining (milling, Lathe, etc.)

Interests: Automotive design/dynamics, Aeropropulsion, Photography, Travel