Dominic Nocon

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EDUCATION:

Purdue University, West Lafayette, IN — May 2022
Bachelor of Science in Mechanical Engineering & Certificate in Entrepreneurship and Innovation — GPA: 3.51/4.0

EXPERIENCE:

Anduril Industries Mechanical Engineering (Propulsion) Intern — May 2021 – Aug 2021
- Contributed to the research and development for Group 3 UAV and Counter UAS propulsion systems (Jet & Reciprocating)
- Designed a lightweight turbine housing to improve the performance of a COTS turbocharger

Purdue Formula SAE – Chief Engineer — May 2021 – Present
- Leading the development of the Purdue Formula SAE 2022 Vehicle
- Improving engine dyno to better calibrate powertrain components
- Leading the switch from a Yamaha R6 4-cylinder to a Yamaha WR450F 1-cylinder

Purdue Formula SAE – Powertrain Team Lead — January 2020 – May 2021
- Led the Powertrain team in creation of the 2020 vehicle, with the goal of educating others, to foster a consistently performing team and vehicle
- Developed the design of an engine dyno stand so our team can tune our engine safely and accurately. A 15% increase in fuel efficiency was achieved for the Yamaha R6 engine used in the 2020 car

Purdue Formula SAE – Drivetrain System Member — August 2018 – January 2020
- Applied problem-solving skills to design, simulate, and develop a chain tensioner, as a solution to incorrect tolerances from the chassis fabrication. Tensioner was used throughout testing as well as the SAE competition in 2019
- Utilized 3D printing knowledge to develop and print differential CV housing covers to keep dirt and grime out of essential components. 3D printed covers worked better than OEM covers, given high half shaft angles

SFMTA Heavy Duty Bus Mechanic (CTE) – San Francisco, CA — Summer 2016 – 2017
- Worked with experienced mechanics to diagnose and repair essential components on New Flyer Hybrid Turbo Diesel Units
- Led and collaborated in teams to complete air system rebuilds, engine rebuilds, & transmission rebuilds
- Performed fabrication techniques which include fiberglass, bodywork, painting, welding, turning, and milling

President – Team 4159 Cardinalbotics, Lowell High San Francisco — May 2017 – May 2018
- Organized, led, and trained a 60-member FIRST robotics team to qualify for the world championship in Houston, TX
- Managed public relations, outreach, budgets, and logistics while working alongside sponsors such as Bechtel and Uber
- Led and organized community outreach events, to inspire the next generation of students to engage in STEM (Science, Technology, Engineering, and Math) activities. (500+ volunteer hours / 4 years)
- Other positions held include Primary Driver (2014-2018), Head of Manufacturing (2017), Head of Design (2018)

PROJECTS / HOBBIES:

Autocross / (High Performance Driving Education) HPDE — August 2018 – Present
- Built and tuned my 1997 Mazda Miata for track driving. Rebuilt and changed entire suspension settings
- Experience rebuilding powertrain, drivetrain, and suspension components

Custom Electric Skateboards — May 2017 - Present
- Designed, manufactured, and tested various brushless motors, mounts, and gear ratios
- Developed custom lithium ion battery packs. Welded and wired them into safe reliable battery packs with BMS
- Calculated gear ratios for torque and top speed, and designed the drivetrain and motor mount based on those parameters

Stock Market Technical Analysis — Summer 2019 - Present
- Developed a MATLAB Program to gather numerical data from Unicorn US and Yahoo Finance to perform technical analysis, calculating when the OEX (S&P 100) was over / undervalued, current profit ~$300, initial investment: $14,000
- Optimized program for faster performance, and made a version that can run on a phone using MATLAB mobile

SKILLS:

- **Software Skills:** Solidworks (Certified), Siemens NX12, CATIA, MATLAB, Fusion 360, GD&T, Basic knowledge of FEA, design for manufacturing, design for 3D printing, Microsoft Office - Word, Excel, Power Point, Basic C, Basic Java
- **Mechanical Skills:** CNC / manual Mills, CNC / manual Lathes, 3D Printing, Drill Press, Bandsaws, Routers, Sanders, Pneumatic Power tools, Hand Tools, etc.
- **Personal Skills:** Self-motivated, Communication, Decision Making, Work Under Pressure, Leadership, Adaptability, Time Management, Personable, Teamwork, Creative