Ahnaf Tajwar

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Objective

To transition my career into the software world and develop my software skill set. Working towards becoming an avid software engineer to create robust and user friendly software.

Education

Boston University

B.S. Mechanical Engineering, *College of Engineering* — Recent Grad May 2021, GPA: 3.76/4.00, Dean's List

M.S. Software Development, *College of Arts and Sciences* — In Progress

Relevant Coursework: Information Structures with Java, Intro to Programming, Intro to Software Development, CAD & Machine Components, Intro to Engineering Design, Aerodynamics, Mechanics of Materials, Product Design, Manufacturing Processes

Skills: MATLAB, Python, Java, C, PTC Creo, SolidWorks, NX, TeamCenter, FEA, ANSYS, COMSOL, STAR-CCM, GD&T, 3D Printing, Rapid Prototyping, DFMA, *English, Bengali, Spanish*

Work Experience

General Motors — *Warren, MI*

Software Integration Engineer - Software Features Integration — February 2022 – Current

- Testing Access and Security features in various vehicle programs accounting for every potential user case
- Troubleshooting Diagnostic Trouble Codes that arise after testing by understanding the software architecture
- Developing feature checklists to document future feature checkout requirements
- Communicating cross functionally with people across the organization to root cause and confirm issues

Project Engineer - Seat Components — June 2021 – February 2022

- Created a catalog of User Defined Features in seating plastics to be used across various vehicles, improving design time and minimizing carryover error
- Conducted FEA studies to analyze stress loads and ensure part rigidity
- Designed a parameterized snap clip in NX that automatically generates an optimal design given some user desired parameters
- Communicated design changes through several engineering documents which are reviewed by various teams

Projects

Mechanical Designer/Team Captain, VitaNeedle Tensile Tester — Oct 2020 – May 2021

- Debugged and redesigned a tensile tester suitable for thin needles for the company VitaNeedle
- Conducted FEA analysis of various needle sizes under different loads to make sure there would be no damage
- Utilized an alternate gripping mechanism that would hold the needles without harm
- Managed team as captain and communicated with client

Team Lead, FSAE Aerodynamics Design, Terrier Motorsport — Sept 2019 – May 2021

- Designed an undertray and bodywork for a Formula Hybrid vehicle utilizing SolidWorks and CFD analysis tools
- Optimized the undertray to create as much downforce as possible with the current chassis and improve aerodynamic performance, while also complying with competition guidelines and total vehicle layout

Mechanical Designer, Automatic Tea Steeper — Sept 2019 – Dec 2019

- Created an automated tea steeper that steeps tea for the user given a tea strength preference
- Conducted a motion analysis and FEA simulation to test for proper mechanical integrity
- Utilized SolidWorks, Creo and Arduinos to create the design and develop the software using C
- Organized and determined design using Gantt, Morph, Pugh Charts, current market, and several design reviews

Programmer, Taiwan Pollution App — Sep 2017 – Dec 2017

- Created an APP in Matlab that outputs whether or not it is healthier to live in a specific Taiwan city or US State.
- Extracted air pollution data from database to compare air quality in each location

Leadership Experience

Team Lead, Terrier Motorsport — Mar 2020 - May 2021

- Developed new undertray and bodywork designs for a second Formula Hybrid electric vehicle
- Managed subteam members for the overall aerodynamics package for the vehicle
- Formulated a manufacturing methodology for future team use
- Created a Gantt chart and documentation for annual timeline, aerodynamic concepts, and design choices

Brigade Member, Global Engineering Brigades — May 2019 – May 2019

- Traveled to a small village in Honduras to work with locals and design a Low Cost Gravity-based Clean Water System
- Collaborated with other brigade members to calculate the pipe flow and sustainability of the system.

Interests

Traveling, Photography, Car and Tech Enthusiast