

# Michael Mechanical

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## OBJECTIVE:

Mechanical Design Engineer at Tesla Motors.

## SUMMARY:

- Engineering design experience in prototyping chassis and suspension of a hybrid vehicle.
- Awarded Best in Automobile Design from Korean Automobile Testing and Research Institute (KATRI)
- Research and development experience for 4 years as mechanical engineering department student assistant on Computer Aided Design, Mathematical Modelling and Engineering Simulation
- Instructor in Physics and Statistics

## SKILLS:

**CAD:** - SolidWorks 2016

- CATIA V5

- Abaqus 6.14

- Creo 4.0 Pro/Engineer

- AutoCAD 2016

- Autopipe V8i

**Programming:** - Matlab

- Labview

- Python

- Visual Basic

- Ansys

- C Programming

**Design:** - 2D and 3D Mechanical Synthesis

- Geometric Dimensioning and

Tolerancing (GD&T)

- Mathematical Modelling and Design

- Finite Element Method

## EDUCATION:

**MS, Mechanical Engineering (Machine Design),** Santa Clara University, CA

September 20xx – present

Current GPA: 3.931

Relevant Coursework: Computer-Aided Design of Mechanism, Advanced Vibration, Optimization in Mechanical Design, Finite Element Methods

**BS, Mechanical Engineering,** University of the Philippines, Diliman, QC

June 20xx – April 20xx

Relevant Coursework: Vehicle Technology, Computational Geometry for CAD and Manufacture

## EXPERIENCE:

**Design Engineer (Nuclear Powerplant), Hitachi Philippines Inc.**

May 20xx – January 20xx

- Reduced the company's material expenses by designing an optimized and cost-effective axial and perpendicular support system for the main steam, extraction steam, cooling water and condensate water system.
- Spearheaded the ASME revision on the company's stress analysis program that increased the standard of nuclear piping system by applying nonlinear combined thermal and seismic modal analysis.
- Improved the design of seismic spring support by applying new Japanese Industrial Standard using software such as Matlab and Solidworks. Also, created a user-friendly spreadsheet for the calculation and data comparison of the old and new design.

**Hybrid Vehicle Designer, DOST-KATRI University of the Philippines**

November 20xx – April 20xx

- Awarded **Best in Automobile Design** and championed the race.
- Designed an improved light weight hybrid monocoque chassis based on general structural consideration and ply failure and laminate design consideration. Utilized modal analysis and simulation using SolidWorks Simulation and Abaqus on the design and developed a high pull up strength on the space frame of the vehicle.
- Improved the double wishbone suspension by remodelling the strut assembly which provided 10% increase on endurance strength on both suspension and wheel system.

**Researcher, Dolphin Type Wave Energy Generator, University of the Philippines**

April 20xx – September 20xx

- Led a team of 8 from the Department of Science and Technology Project who designed and manufactured the machine elements of the prototype of the wave powered generator. The project currently provides 1000 W electricity to 30 household near the shore.

## PROJECT:

**Team Leader: Foldable Vehicle Project**

December 20xx – April 20xx

- Designed 3 meters long, electric powered vehicle that can reduce its length to 1 meter by applying the concept of telescoping mechanism and 2D mechanical synthesis. The goal of the project was to provide solution on the overcrowded parking space by creating a design and prototype of a car that can be folded when parking.