

HONG WEI TAN

Mechanical Engineering Major
Senior (Final Semester) [CGPA: 3.63]
Graduating in **December, 2019**



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Personal Statement

Member of SAE and ASME. Experienced public speaker under *Toastmasters International*. Looking for a full time position in the field of **Internet of Things (IoT)** and **Product Engineering** in Spring, 2020.



Education

[Bachelor of Science, Mechanical Engineering]

From August, 2017 (On-going)
Illinois Institute of Technology, Chicago, IL.

Relevant Coursework:

[MATLAB, Material Science, Fluid Mechanics, Advanced Thermodynamics, Computational Mechanics, Dynamics, Advance Mechanics of Solids, Heat and Mass Transfer, Mechanical Laboratory, Design of Machine Elements]



Work Experience

From May 2019 to August, 2019

Cummins Inc. (Jamestown Engine Plant)

Product Validation Engineering Intern (System & Performance)

- Retrieve engine data from telematics, engine control module, and dataloggers for statistical analysis using MATLAB.
- Created automation MATLAB scripts and function tools to reduce data mining process significantly.
- Reduced high crankcase pressure fault codes in field engines by 88% by overlaying new tunings.
- Went through problem solving frameworks, such as (IDFMEA), (RCA), and (FTA) to solve problems systematically.

From June, 2018 to August 2018

Siemens Energy Management

Industry Trainee (Transformer and Low Voltage Product)

- Supported Sales Team in Bid Management for Transformer Tenders with Excel and Visual Basic.
- Standardized Online Sales Portal for Low Voltage Products.
- Assisted on documentation on Renewable Energy and Power Storage
- Understood Siemens Manufacturing processes at the Siemens Licensed Factory



Technical Skills

Tools

Rhinocam, Fusion 360

Laser Cut, 3D Print, Power Tool

Microsoft Office Suite

HTML, Java-script & CSS

MATLAB

Adobe Creative Suite

Inventor, Solidworks, Creo

Arduino, Raspberry Pi

Java, Python, C++

Six Sigma, Kaizen, 5S

Functions

CNC and CAM

Rapid Prototyping

Documentation & Spreadsheet

Front-End Web Design

Data Analysis & Simulation

Graphic & Content Design

CAD & FEA Analysis

Internet of Things & Robotics

Object-Oriented Programming

Lean Manufacturing and-

Warehouse Improvement



Projects

From January, 2019 to May, 2019

Senior Design Project, Spring 2019

Alexa Enabled Smart Shoe Cleaning Device

- Spearheaded electronics and automation control design.
- Programmed wifi module to exchange signals with Alexa to improve automation features.
- Successfully reduced sneakers cleaning time from 10 minutes to less than 2 minutes.
- Incorporated various mechanical design elements such as ball bearings, gear designs, high tolerance fabrication, and press fittings.

From August, 2017 (On-going)

Society of Automotive Engineers (SAE)

Powertrain Sub-team Member

- Designed the wheel hub assembly with SAE standard for the formula racing car by using Autodesk Fusion 360.
- Applied FEA analysis, lightweighting, and optimization on design models, 17% lighter than previous year's hub design.
- Plotted fabricating parts on Rhinocam for CNC fabrication.

From August, 2017 to December, 2017

American Society of Mechanical Engineers (ASME)

Student Design Competition Mechanical Team Lead

- Designed and fabricated a RC robot that plays soccer.
- Gained manufacturing experience like machine shop, 3D printing, CNC and laser cutting to fabricate parts.
- Carried out weekly project meetings, allocated tasks, and facilitated team's communication.

From July, 2016 to July, 2017

INTI Subang Toastmasters Club

President

- Developed more than 50 college student's public speaking skills by holding a public speaking sessions bi-weekly.
- Provided mentorship program to members for a higher quality guidance and engagement.
- Awarded with Presedential Distinguish Club Title from Toastmasters International.



Organizations / Extracurricular

Tau Beta Pi (Illinois Tech Chapter), *Historian*

From March, 2019 (On-going)

Illinois Tech Office of Residence Life, *Residence Advisor*

From August, 2018 to May, 2019

Society of Automotive Engineering (SAE), *Team Member*

From August, 2017 (On-going)

American Society of Mechanical Engineering, *Team Member*

From August, 2017 (On-going)