

# SHAUN CHACKO

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## Education

### **University of Michigan**

B.S.E. Mechanical Engineering

Ann Arbor, MI

September 2015 - December 2019

## Certification

### **Engineer in Training**

*Fundamentals of Engineering (FE) Exam*

Completed January 2019

## Professional Experience

**US Environmental Protection Agency:** National Vehicle & Fuel Emissions Laboratory    Ann Arbor, MI  
*Senior Design Project*    September - December 2019

- Designed a stand-alone prototype to monitor positional data during on-road operation of a vehicle with additional research to monitor tailpipe temperature, oxygen content, etc.
- Compared prototype readings against OBD-II and third-party CAN modules
- Programmed prototype readings to replicate driving conditions on a chassis dynamometer

### **TC Energy Corporation**

Troy, MI

*Mechanical Engineering Intern, US Gas Operations Engineering Support*

May - August 2018, 2019

- Gathered tank & pressure vessel inspection reports and ran calculations in accordance with API/DOT/ASME codes to verify assets' fitness-for-service at U.S. natural gas compressor stations
- Clarified concerns from Federal Regulators (PHMSA Auditors) regarding pressure safety device flow capacity calculations and station overpressure protection procedures to protect turbines, centrifugal compressors, reciprocating engines, & interstate natural gas pipelines (e.g. GLGT, ANR Pipelines)
- Field visits to compressor stations to assess fall hazards and propose OSHA compliant infrastructure thereby ensuring the safety of operators.
- Collaborated with Engineers, Financial Analysts, and the Legal team to assist with smaller projects within the Engineering Services division

## Extracurricular Activities

### **H2O Campus Ministries, President**

January 2017 - April 2019

- Facilitated weekly small group meetings where students discussed spiritual topics and shared personal opinions/ideas
- Managed finances of the student organization and collaborated with other university organizations to host events on university premises

### **Michigan Hyperloop, Integration and Interface Designer**

December 2016 - December 2017

- Modeled suspension components of a high-speed transit pod using CAD software
- Manufactured parts from CAD drawings using both CNC machinery and conventional tools
- Consulted with programmers and engineers in industry to ensure that designs were feasible in low-pressure transit tubes for high-speed applications
- Final Design Package approved by SpaceX and pod competed in Hyperloop Competition

## Technical Skills & Qualifications

**Coding Languages:** C++, MATLAB, Python, JavaScript, HTML, CSS

**CAD & FEA Software:** Autodesk® Inventor, CATIA, Solidworks®, Altair HyperMesh