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**SUMMARY**

- Seeking an internship/Full-time position to apply my technical capability and leadership skills.
- Strong background in the fields of chemical process safety, process systems engineering and marine transportation.
- Proficient in risk analysis tools, process design software and machine learning / deep learning skills.
- Various LNG/carbon capture research experiences, Lead PI of one project and 9-year research experience.

**EDUCATION**

- **Texas A&M University**, College Station, TX  
Doctor of Philosophy in Chemical Engineering (3.87/4.0) Expected: Aug. 2021  
Master of Science in Safety Engineering (4.0/4.0) Dec. 2017
- **Dalian Maritime University**, Dalian, China  
Master of Science in Transportation Engineering Jul. 2011  
Bachelor of Science in Marine Navigation Jul. 2009

**EXPERIENCE**

**Texas A&M University**, College Station, TX

Graduate Research Assistant, *MKO Process Safety Center / Gas and Fuels Research Center* 01/2016 ~ Present

A Holistic Approach to Creating the Next Generation of Sustainable Strategies for Shipping Fuels for *Trafigura*

- Conducted critical survey and life cycle assessment of current available shipping fuel options and promising fuels;
  - Developed novel emission models and calculated gas emissions for 303 ships under IMO 2020 Sulphur Cap;
  - Completed techno-economic, carbon footprint and safety benchmark study for LNG, LPG, NH<sub>3</sub>, H<sub>2</sub> and Methanol.
- Shipping fuel safety study via machine learning models (*Matlab, Python, R, GAMS, ANSYS Fluent, FLACS and PHAST*)
- Studied properties prediction for liquid aerosolization contributors via optimal supervised machine learning models;
  - Developed two state-of-art unsupervised clustering models to establish liquid in-cylinder combustion risk criterion.
- Post combustion carbon capture for tank to propeller via process intensification (*Aspen Plus, GAMS, Pro/II, gPROMS*)
- Constructed a dual-fuel marine engine model and MEA based carbon capture pilot plant model;
  - Designed processes for a maritime carbon capture system and optimized size determination of absorber & stripper;
  - Conducted sustainable process intensification with Rotating Packed Bed and Printed Circuit Heat Exchanger.

Global LNG Tanker Fleet Inventory Model Development for *RBAC Inc.*

- Employed *R* to build LNG Fleet Optimization model by QDA, LDA, KNN, Bootstrap aggregating, SVM;
- Tested the model performance to optimize current *G2M2<sup>®</sup> Global Gas Market Modeling System<sup>TM</sup>*.

**Dalian Maritime University**, Liaoning Province, China

Lecturer/Assistant Professor, College of Navigation, Full time 07/2011 ~ 01/2016

- Instructed undergraduate students and professional deck officers in *marine transportation* and various other courses.
  - Served as the *third officer on board* for ten months, mastered skills in ship maneuvering and safety management.
  - *Lead Principal Investigator* of Facility Siting Study of LNG Offshore Platform based on Ship Simulator
- Relevant Projects: Study for FSA of *Jiangsu* and *Dalian* LNG Terminals; Feasibility study on Single Point Mooring System for *Caofeidian* port area; Study on Security Zone of LNG Carrier for *Zhejiang* LNG Terminal.

**LEADERSHIP**

- Vice President, Chinese Students & Scholars Association (CSSA), *Texas A&M University*, 2017~2018.
- Top Student Leader, College of Navigation, *Dalian Maritime University*, 2010~2011.

**CERTIFICATION**

Chemical Engineer EIT (TX, 64072); NVIDIA Deep Learning Certificate; SAS Certified Advanced Programmer; SAS Certified Statistical Business Analyst; Project Management - Lean Process Certificate; Six Sigma Green Belt Certificate (7082744); Executive Management Certificate; Certificate for Hazard Analysis for LNG Facilities; Member of *Tau Beta Pi* National Engineering Honor Society (# 085-08213-2); Certificate of Deck Officer for Merchant Marine Officer