LICHEN WU, E.I.T.

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EDUCATION

University of Maryland, College Park *Expected May 2020*

Master of Engineering, Mechanical Engineering

A. James Clark School of Engineering

GPA: 3.44/4.0

Shandong Jianzhu University, Jinan *Jun 2018*

Bachelor of Engineering, Building Environment and Energy Application Engineering

GPA: 3.7/4.0 Overall Percentage: 1%

SKILLS

-Software AutoCAD, EES, Matlab(Simulink), OpenFOAM, Revit(Begineer)

-Development Python, C, Java, Linux OS, git LaTeX

RESEARCH EXPERIENCE

Research Volunteer, Hydrodynamics Lab *College Park, U.S.* *Dec 2019-Present*

- Droplet-surface impact: image, simulate and analyse.
- Water surface imaging in response to single drop.
- Measuring drop diameters and velocities with high speed digital camera.
- Images processing with Matlab

Undergraduate Thesis, *Jinan, China* *Mar 2017-Sep 2017*

- Designed Central Air-conditioning system for a community hospital
- Trading off between the indoor comfort and costs
- Try to analyse indoor air parameters with CFD commerical software

PROJECTS

Numerical Methods for Heat Transfer and Fluids Flow *College Park, U.S.* *Aug 2019*

- Implementation of Semi-Implicit Methods for Pressure Linked Equations with Matlab
- Implementation of tutorials of OpenFOAM based on Linux
- Understanding Global Optimization based on Gaussian Process or Kriging
- 12 Steps solving Navier-Stokes equations based on tutorials of Professor Lorena Barba
- Visualization of fundamentals of CFD. Github: @xixihaha1995

Cooperative Adaptive Cruise Control *College Park, U.S.* *Sep 2019-Dec 2019*

- Modeled a realistic scenario in the presence of traffic light

- Linearize original model around the reference equilibrium
- Achieved Safety distance and kept passengers comfortable

Primary Energy Efficiency of Energy Systems *College Park, U.S.* *Feb-May 2019*

- Analysed cooling and power need based on Bin method via EES
- Designed CHP with fabrication of microturbine, absorption cycle and grid
- Saved 27 % seasonal primary energy compared with grid and vcc thermal system

Define Heat Capacity via Statistical Mechanics *College Park, U.S.* *Apr-May 2019*

- Statistical prediction of macroscopic thermal properties
- Analyse the essence of heat capacity from microscopic
- Fitting and backcalculating integral function with Matlab experimental datas

Prediction of Passenger Boarding based on ML *College Park, U.S.* *Sep-Dec 2018*

- Features selecting from high dimensional datas [91, 2400]
- Fitting datas with *Multiple Regression, Cross-Validation, sklearn, numpy, matplotlib*
- R2(coefficient of determination) regression score reached 0.92

Carbon Free UMD Campus *College Park, U.S.* *Sep-Dec 2018*

- Evaluate the price data and environmental impact of natural gas and renewable energys
- Estimate supplying all energy needs for the UMD from renewable resources
- Calculate practical wind turbine capacity with data from *Typical Meteorological Year 3*

COURSES

Self-taught CS	CS61B Data Structures(UC Berkeley)
UMD	Fundamentals of Fluid Mechanics, Advanced Systems Control
	Continuum Mechanics, Molecular Thermodynamics
	Energy Systems Analysis(Prof. Yunho Hwang), Applied Machine Learning;
	Sustainable Energy And Conversion, Stationary Power(Dr. Canton)

HONORS AND AWARDS

- Outstanding Graduates *Nov 2017*
- Final of 10th National Energy-saving and Emission Reduction Contest *Jun 2017*
- Shandong Sanjian Scholarship *Nov 2016*
- First Prize of 7th BIM Competition *Jun 2016*