Younggi Lee

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EDUCATION

Georgia Institute of Technology Jan 2018- May 2021
Bachelor of Science in Mechanical Engineering *Atlanta, GA*

- Dean's list
- **Relevant Coursework:** Robotics, Control Dynamic Systems, Interactive CAD& CAE

Troy State University Jan 2016-Dec 2017
Bachelor of Science in Physics *Troy, AL*

- Chancellor's Honor list, Provost's Honor list
- Scholarship for high academic performance for international students

EXPERIENCE

Agile Locomotion & Manipulation (Athena Head Eye sub-team) Jan- Dec 2020
Research Assistant *Atlanta, GA*

- Designed eyes and 3 Degrees of Freedom mechanism to build a vision of humanoid robot
- Conducted FEA and collision detection test using SolidWorks and controlled parts weight and sustainability
- Programmed speed and rotation range of yaw and pitch, 90& 70 degrees of eyes and Stewart Platform with Arduino

2D Heterostructure Synthesis Aug- Dec 2019
Research Assistant *Atlanta, GA*

- Developed sulfurized deposited monolayer of Mo and W using molecular beam epitaxy for area growth on sapphire substrate
- Analyzed data obtained by Electron Microscopy using Excel and XPS to find the best temperature and time for sulfurization

SKILLS

Software: SolidWorks, NX, Ansys, AutoCAD, CES, Simulink, LabView Excel, Word, PowerPoint, Outlook, XPS
Programming: MATLAB, Python, SQL, Arduino, HTML/CSS, JavaScript
Languages: English- fluent, Korean- fluent, Chinese- intermediate class level, Japanese- intermediate class level
Instrumentation: Arduino, CNC machines, laser cutter, 3D printer, NI ELVIS III
Certification/ license: Georgia Tech Coding bootcamp certificate (expected Dec, 2021), EIT(expected 2021), CSWP (2021), CSWA (2020), IBM Data Science Professional Certificate (2021)

PROJECTS

Jacobsen Mower Deck Efficiency Improvement/Optimization (sponsored by Textron) Jan2021- May 2021

- Demonstrated airflow within deck and blade using CFD through Ansys, and Siemens NX
- Optimized market product model designs with SolidWorks based on CFD results
- Improved efficiency of the current company model such that cutting ability increases by 15% and weight reduces by 10%

Structural Analysis of horizontal-axis wind turbine blades based on CFD and FEA Sep 2020- Dec 2020

- Created complex geometric wind turbines model to perform FEA and CFD and optimized blade and gearbox using NX
- Computed Loads and aerodynamic forces on 5 sections of the blade using MATLAB and NX
- Identified the best material, angle, and web design which derives the better efficiency and sustainability of the turbine

Acoustic Absorption Experiment Aug 2019- Dec 2019

- Proposed a mechanical experiment to discover the most effective material in absorbing noise in our life
- Measured and analyzed the frequency of reflected sound from 8 different absorption materials with MATLAB and LabVIEW

Azkaban Creative Design Competition (sponsored by BP, Shell, Ford and Toyota etc.) Aug 2018- Dec 2018

- Built a competition machine to perform sorting and collecting items within limited budget and dimension restriction
- Generated real-time application code by using LabVIEW to deploy all functions of machine with a switch
- Top 8 out of 60 teams (Up to semifinal)