
NICHOLAS NG



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SUMMARY

Project Officer currently working on research projects in Nanyang Technological University. Proficient in CAD modelling and enjoys turning ideas and drawings into 3D models. Experienced in MATLAB, NI LabView, and ANSYS. Graduated with a B.Eng. in Aerospace Engineering (Upper Second Class Honours).

EXPERIENCE

PROJECT OFFICER

NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

2018/02 - PRESENT

Responsibilities:

- Worked on Drone Predictive Maintenance project.
- Handled sourcing and purchasing of drone parts for building custom drone.
- Assembly and troubleshooting of drone.
- Testing and data collection of the drone in flight.
- Other duties include 3D printing of strain gauges and testing of strain gauges.
- Oversaw lab safety as Lab Safety Representative.
- Assist with development of in-process monitoring system for metal 3D printing, using multiple cameras and computer vision techniques. LabView is used for data collection.
- Collaborated with multiple colleagues/students for paper writing and submission
- Collaborated with HMGICS for logistics and preparation for competition event
- Development of direct printing material and process on 3D structure for wearable devices funded by Samsung Electronics.
- Assisted in 3D printing of graphene based samples for development of 3D-Printed Electrode for High-Energy Rechargeable Batteries.
- Design and Process Optimization of Polyamide 11 (PA11) 3D Printed Structures for Enhanced Impact Performance in Automotive Applications, funded by Arkema.
- Metal 3D Printing in Aerospace Industry, funded by Korea Institute of Materials Science (KIMS).
- Assisting on collaborative projects funded by NAMIC: 3D-Printing Membrane for Industrial Wastewater Treatment.
- Development of in-process monitoring system for DED 3D printing process.
- Research and Management for Hyundai Corp Lab Project

CERTIFICATES

2019-06

Certified SolidWorks Professional -
Mechanical Design

2019-06

Certified SolidWorks Associate -
Sustainable Design

2019-06

Certified SolidWorks Associate -
Additive Manufacturing

SOFTWARE

2019-06

Certified SolidWorks Professional -
Mechanical Design

2019-06

Certified SolidWorks Associate -
Sustainable Design

2019-06

Certified SolidWorks Associate -
Additive Manufacturing

R&D INTERN DNV GL MARITIME

2017/05 – 2017/07

- Assisted with Computational Fluid Dynamics simulation of fluid flow in a ship's ballast tank and develop ways to reduce sedimentation in the tank, using simulation software OpenFOAM.

EDUCATION

B. ENG. IN AEROSPACE ENGINEERING NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

2013/08 – 2017/07

GPA 4.16 (Upper Second Class Honours)

FINAL YEAR PROJECT | DESIGN AND CFD STUDY OF A SIMPLE WIND TURBINE

- Designed a simple wind turbine and optimized its variables, including airfoil shape and blade radius; calculations were done using MATLAB.
- Modelled the geometry using SolidWorks and imported it into ANSYS for CFD analysis and structural analysis using Finite Element Method.

SEMESTER EXCHANGE PROGRAM KAIST, SOUTH KOREA

2016/03 – 2016/06

GPA 4.16 (Upper Second Class Honours)

FINAL YEAR PROJECT | DESIGN AND CFD STUDY OF A SIMPLE WIND TURBINE

- Worked in a team of 6, designed a UAV suitable for South Korea's military usage using mission requirements such as flight path and payload.
- Optimized variables using aircraft performance concepts and analysis software such as ANSYS, XFLR and MATLAB.

