KEVIN GNANARAJ

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WORK EXPERIENCE

Project Assistant in air traffic analysis **October 2024 - Present**
Chalmers University of Technology

- Working on data analysis platform of aircraft operational patterns in Sweden using public transport data in Python.
- Objective is to observe the effects of replacing aircraft within current fleets with future sustainably propelled aircraft. Metrics observed are emissions and aircraft operational patterns. Tool is also intended to set aircraft design parameters to minimise emissions.

Project Assistant in sustainable aircraft design **June 2023 - August 2023**
Chalmers University of Technology

- Tasked with aeroelastic analysis of high aspect ratio composite wing with distributed propulsion, used ANSYS OpenVSP, and Python, obtaining results showing wing was not structurally sound with given design and made recommendations for design improvements.

Business Improvement Administrator **July 2020 - April 2022**
Sheridan Electric Services Ltd.

- Developed and updated training documents and standard operating procedures for employees to use company systems and hardware.
- Managed project to migrate email providers from Google Workspaces to Microsoft 365, and transfer of phone services to alternate provider.
- Streamlined procedure for company fleet compliance with regulatory and internal readiness.
- Researched and proposed solutions to automate invoicing that were incorporated into the new invoicing system.

THESIS PROJECT

CFD Study on Ducted Rotors for an Urban Air Mobility (UAM) Vehicle **January 2024 - August 2024**
Chalmers University of Technology

- Airmobility Emergency System Project would like to use commercial propellers to build air ambulance drone prototypes, and needs validation of performance in coaxial configuration.
- Carried out investigation of performance using ANSYS CFX of selected propeller models, and compared to experimental data for validation of model.
- Results showed that propeller performance is sufficient for hovering conditions, but limited by tip speed for other operations, so recommendations were made for selection and further investigation of appropriate propellers.

EDUCATION

Master of Science, Mobility Engineering - Aerospace & Fluids **September 2022 - August 2024**
Chalmers University of Technology

- Relevant courses: Aerospace propulsion, Aircraft design, Project in aerospace, Turbomachinery, Compressible flow, Computational fluid dynamics (CFD), Turbulence modelling

Bachelor of Science in Mechanical Engineering **August 2014 - June 2019**
University of Saskatchewan

SKILLS

- 3-D Modelling: Solidworks (Certified Professional), Rhino3D, Fusion 360, Inventor
- Programming: C, C++, Python, JavaScript
- Analysis: ANSYS Mechanical, CFX, Fluent, StarCCM+, MATLAB, Simulink
- Language: English (fluent), Swedish (conversational)