George Lin

| Portfolio Website | linkedin.com/in/george | github.com/george

Education

University of British Columbia — Expected: May 2027
Bachelor of Applied Science in Electrical Engineering — Dean's Honour List - CGPA: 87.2% | 3.8/4.0

Experience

UBC UAS Student Design Team — Sep. 2022 – Present
Aircraft Team Lead — *Vancouver, BC*

- Leading an interdisciplinary team of over 10 electrical and mechanical engineering students
- Creating a comprehensive strategic roadmap for a Vertical Takeoff and Landing (VTOL) aircraft project
- Managing the progress of an antenna tracking system

Aircraft Subteam

- Ran analysis in XFLR5 to meet specified lift requirements for a wing on a VTOL aircraft
- Improved lift-to-drag ratio over previous year's design by 41% through utilizing a different airfoil combination
- Used SOLIDWORKS to create production ready CAD of the aircraft wings
- Designed landing gear using SOLIDWORKS leading to a 14% weight reduction over previous year's design
- Soldered XT90 connectors and wired critical components on aircraft under time pressure

Technical Support Specialist — May. 2023 – Present
Homes Way — *Edmonton, AB*

- Managing documentation and engineering drawings for permit applications on $320,000 commerical renovation
- Creating cabinet drawings and 3D models for clients on numerous $10,000 renovations
- Redesigned old webpage for company's current selection of products improving SEO by 12%

Projects

Time-frequency analysis in MATLAB | *DSP, MATLAB, LaTeX* — Aug 2023

- Created research style paper with LaTeX adhering to IEEE format and structure - Visit Project
- Built custom spectrogram function with 11% improved execution time over spectrogram function in MATLAB Signal Processing Toolbox
- Employed time-frequency analysis techniques on audio files

Sonar Depth Mapping System | *PCB Design, Python, Arduino* — June 2023

- Used MATLAB to display real time data from GPS and IMU sensors
- Implemented a Kalman Filter to process sensor data to reduce uncertainty in measurements
- Created a custom PDB in KiCAD to manage simplify connections to sensors and arduino
- Used depth data from a underwater distance sensor with GPS data to create a bathymetric map

State estimation with 6 axis IMU | *Controls, Sensor Integration, Arduino, Processing* — May 2023

- Applied sensor fusion techniques to achieve more reliable and accurate in state estimations
- Applied moving average filtering to reduce white noise in measurements
- Created live state estimation visualization of pitch, roll, and yaw using Processing graphical library

Single Axis Solar Tracker System | *Controls, Sensor Integration, Arduino* — Dec 2022

- Developed a controls algorithm to move the solar panel based on intensity of detected light
- Integrated servo motors to enable precise control of solar panel
- Created wiring diagram in KiCAD showing connections between Arduino, sensors, and servos

Technical Skills

Languages: MATLAB, Python, C/C++
Software: KiCAD, SOLIDWORKS, Altair Feko
Developer Tools: Git, VS Code
Libraries: pandas, NumPy, scikit-learn
Certifications: IBM - Python for Data Science, IBM - Machine learning with Python
Manufacturing: Soldering, Laser Cutting, FDM 3D printing