Matthew Klenk

Seattle, WA | 425-499-1163 | matthewklenk4@gmail.com | LinkedIn | Portfolio

Experience: Mechanical engineering senior at the University of Washington with professional experience in engineering design, stress analysis, robotics, and control systems.

Belcan **January 2023 – August 2023**
Aerospace Engineering Co-op *Bellevue, WA*

- Reduced the run time of an existing Boeing stress analysis tool from 72 hours to 1 hour while maintaining 99.9% accuracy with the original tool.
- Updated 4 Structural Repair Manuals for Repairable Damage and Allowable Damage Limits for multiple Boeing 777X primary wing structures.
- Generated a centralized repository for geometric data from CATIA that is compatible with all Boeing analysis software.
- Exceeded Boeing 777X Wing Stress Engineering Team's expectations on all 3 projects.

UW Control and Trustworthy Robotics Laboratory **September 2022 – Present**
Undergraduate Researcher *Seattle, WA*

- Developing trustworthy decision-making and control algorithms for autonomous systems.
- Generating code that produces a collision-free, dynamically feasible trajectory for quadrotors.
- Improving guidance, navigation, and control (GNC) technology for autonomous systems.

UW Autonomous Flight and Systems Laboratory **June 2022 - September 2022**
Control Systems Engineering Intern *Seattle, WA*

- Developed a UAV capable of GPS-free, vision-based navigation with thermal imagery for wilderness search and rescue missions.
- Improved the confidence score of human-identification machine learning algorithms to 80%.
- Implemented a relay drone that allows the search team to cover an extra 2 miles of ground beyond the visual line of sight without violating FAA regulations.

Leadership Activities

University of Washington Men's Ice Hockey **August 2020 - Present**
Team Captain

- Leading a team of 30 players through weekly practices and games.
- Organizing merchandise, team travel and equipment purchases.

Redmond Penguins Special Olympics Swim Team **September 2018 – March 2020**
Volunteer Coach

- Motivated a group of individuals with intellectual and developmental disabilities.
- Organized swim meets for multiple different teams every other month.

Education

University of Washington | Seattle, Washington **Expected Graduation June 2024**
Bachelor of Science, Mechanical Engineering

- Dean's List, Engineers Without Borders Club, Cumulative GPA: 3.71 (In-Major: 3.86)

Skills

Languages: Python, Java, MATLAB, Excel VBA, Linux
CAD: CATIA V5, Enovia LCA, SolidWorks, Autodesk Inventor
FEA: Patran, Nastran, Ansys
Additional: Collaborative Autonomy, Machine Learning, Computer Vision, PCB Design, GD&T