SEAN WARD

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EXPERIENCE

Autonomous Vehicle Engineer   June 2021 - Current

Canyon View Technology

- Founded company providing Autonomous Vehicle consulting services
- Design, plan, and build autonomous aerial (UAVs) and ground (UGVs) vehicles using Ardupilot, PX4, Mission Planner, and QGroundControl
- Flight Controls, Vehicle Test and Simulation
- R&D work with focuses in mechatronic systems, robotics, and prototyping

eVTOL Tiltrotor Development   Jan 2023 - Current

Client: Hopflyt

- Develop custom Ardupilot flight controls for channel wing, tiltrotor vehicle
- Develop simulation environment with Software in the Loop (SITL) to experiment and test configurations
- Write test cards, perform flight test, system identification/modelling based on test data

Gimbal Integration and Development   May 2023 - Current

Client: Miracad Technology

- Lead R&D efforts to assist Miracad's Industrial Surveying and Mapping services
- Develop automated gimbal movement profiles built upon Ardupilot
- Gimbal and payload integration, tuning and test

Custom UGV Development   July 2022 - Current

Client: Horizon Roofing

- Lead R&D project to develop custom ArduRover builds to assist roofing operations
- Develop and tune wall tracking behavior, GPS following, obstacle avoidance, and navigation
- Integrate range of sensors such as 360 lidars, rangefinders, RTK GPS and telemetry

Graduate Research Assistant   June 2020 - June 2021

University of Missouri - Kansas City

- Develop and test Inverted Quadrotor Descent for the The U.S. Army CCDC Program
- Develop custom PX4 branch for Inverted Descent Mode
- Python and Matlab scripts for data analysis, modelling and reporting
- Research published in AIAA SciTech Conference (Jan 2022), the world's largest event for aerospace research, development, and technology

EDUCATION

Master's of Science in Mechanical Engineering   May 2021

University of Missouri - Kansas City

- Emphasis in Robotics and Control Systems

Bachelor's of Science in Mechanical Engineering   May 2020

University of Missouri - Kansas City

- NASA Space Grant Consortium

TECHNICAL STRENGTHS

Computer Languages	Python, MATLAB, C++, Lua
Software & Tools	Ardupilot, PX4, Arduino, Raspberry Pi, ROS, MAVSDK, SIDPAC Toolbox, RealFlight Sim, Gazebo, Pymavlink, Solidworks

CERTIFICATIONS

FAA Certified Remote Pilot

Certified Solidworks Mechanical Design Associate

Certified Solidworks Additive Manufacturing Associate

UMKC Online Teaching Certification