ALEX VRBKA

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SUMMARY

Dedicated and skilled UAS Product Manager with proven expertise in handling all phases of product life cycles. Experienced UAS pilot with hundreds of commercial and R&D hours as the pilot in command. Works effectively with customers, senior leaders, and vendors to coordinate efficient development phases, product releases, and technical training resources and programs.

EXPERIENCE

UAS Research and Development Manager — Valmont   *August 2022 – Present*

- Oversee the design, implementation, and testing of advanced technologies including autonomy, AI, sensor fusion, and IoT (Internet of Things)
- Spearhead multiple UAS-centric products at Valmont Utilities, including sensor installation, coatings, at-height pressure washing, Drone-in-a-box program, and conductor measurement
- Manage cross-functional teams in the research & development of these UAS platforms, ensuring adherence to project timelines using agile/scrum methodologies, budgets, and technical specifications
- Conduct feasibility studies and prototyping for new UAS applications, contributing to the expansion of operational capabilities and market offerings such as multiple sensor data collection per pass and automated data handling
- Provide technical expertise and guidance in UAS operations and maintenance
- Design and implement comprehensive training curriculums for all new UAS platforms, programs, and equipment

UAS Research and Development Pilot — Valmont   *March 2021 – August 2022*

- Built and flew multiple custom payloads for unique missions, including tetherless pressure washers, at-height measuring, and conductor measurement
- Conducted flight missions as the pilot in command for over 500 commercial flight hours of data collection including thermal, LiDAR, RGB, and NDVI
- Assisted with training of new on-demand pilots through the Valmont ASCEND program

Student Researcher — University of Nebraska Omaha   *January 2020 – August 2020*

- Developed a runway incursion prevention device that used both RTK-GPS and LoRa radio for use in general aviation airports. This project was developed and funded by the FAA through the Airport Cooperative Research Program
- Utilized C++ and various development boards to alert pilots and personnel to possible runway incursion during taxi, takeoff, and landing operations

EDUCATION

B.S. in **Aviation**; Concentration in **Unmanned Aircraft Systems** *December 2021*
University of Nebraska Omaha

CERTIFICATIONS

Part 107 License
OSHA 30
AUVSI Trusted Operator Service Provider

VOLUNTEER EXPERIENCE

Drone Workshop Volunteer — Mystery Code Society *December 2022 – Present*
- Teach workshops on drone flight and programming to elementary and middle school students using scratch coding interface

UAS Training Volunteer — Papillon Police Department *February 2023 – Present*
- Contribute to training seminars by giving presentations on using robotics and UAVs to navigate and scan new environments. Give one-on-one and group lessons to police officers on drone flight in the most demanding situations

SKILLS

Technical training design & delivery	AutoCAD/Fusion360
UAS research & development	OSHA regulations & safety compliance
UAS piloting	Risk assessment & mitigation
Equipment design/construction	Stakeholder management
Product lifecycle management	Agile methodologies
Documentation & resource management	Written & oral communication
Advanced computer systems skills	Technical writing
Roadmap development in Jira	Team leadership

ACHIEVEMENTS

- Launched a fully autonomous, drone agnostic, power line inspection program enabling aircraft to fly by following power lines/towers and photographing them without a pilot directing the mission or intervening mid-flight. Successfully proved the product with a 183 mile flight collecting real world data and organized a press release
- Enhanced training programs, resulting in higher pilot competencies and faster training times based on previous training lessons. In addition, created new documentation that decreased post-training questions from pilots and equipment downtime