Nikolai Kirby

AI Flight Optimization Engineering Intern

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STRENGTHS

Collaboration
Fostered collaborative environments among engineers, amplifying teamwork that led to impactful flight optimization solutions.

Problem-Solving
Demonstrated strong analytical skills by resolving technical challenges during AI prototype development, earning peer recognition.

Adaptability
Quickly adapted to rapidly changing project requirements, maintaining composure under pressure while ensuring successful outcomes.

Innovative Thinking
Produced original ideas that enhanced software processes, directly contributing to efficiency improvements in AI workflows.

Technical Writing
Articulated complex technical information clearly in documents, boosting understanding among diverse stakeholders involved in projects.

SKILLS

Python | Machine Learning | AI Development | Data Analysis | Git | Agile Methodologies | Telemetry Analysis | Software Development | Model Training | Feature Engineering | Predictive Algorithms | Simulation Data Processing | System Testing | Automation Techniques

SUMMARY

Graduate student in Computer Science with substantial hands-on experience in artificial intelligence and machine learning applications for aerospace. Proven capability in Python programming and software development enhances ability to contribute effectively in innovative aerospace engineering contexts. Experience in telemetry analysis and flight optimization projects aligns well with organizational goals. Competent in developing and refining AI-driven solutions that boost efficiency, safety, and performance in aviation. Eager to collaborate with a talented team at Skydweller Technologies for meaningful contributions to advanced aerospace technologies.

EDUCATION

Master of Science in Computer Science

University of Oklahoma | GPA: 3.8 | 2026 | Norman, OK

Coursework: *Algorithms, AI Applications, Software Development, Data Structures*

TECHNICAL SKILLS

- **Programming Languages:** Python
- **Machine Learning Tools:** TensorFlow, scikit-learn
- **Version Control Systems:** Git
- **Agile Methodologies:** Scrum, Kanban
- **Database Management Systems:** SQL, MongoDB
- **Cloud Platforms:** AWS, Azure
- **Development Frameworks:** Flask, Django
- **Data Visualization Tools:** Matplotlib, Seaborn
- **Telemetry Analysis Tools:** MATLAB, LabVIEW
- **Testing Frameworks:** pytest, unittest

EXPERIENCE

AI Flight Optimization Intern

University Research Lab | January 2026 - Present | Tulsa, OK

Support R&D initiatives at University Research Lab focusing on agentic AI for aerospace applications. Engage in software development activities while collaborating closely with industry experts to advance knowledge in the field.

- Collaborated with engineers to design an Agentic AI prototype for analyzing flight data, enhancing overall aircraft performance.
- Developed Python scripts for processing aerospace telemetry datasets, streamlining data analysis through efficient automation techniques.
- Participated in agile development sprints, contributing valuable insights during design reviews and team discussions, which shaped project goals.
- Documented workflows and system architecture, improving clarity and communication of methodologies for stakeholders.
- Assisted validation efforts ensuring AI recommendations met the necessary standards for safety and performance.
- Researched autonomous aircraft operations with a focus on optimizing energy efficiency and operational endurance.

Machine Learning Project Developer

Student Innovation Lab | September 2025 - December 2025 | Tulsa, OK

Played an integral role in presenting machine learning innovations through classroom projects, showcasing predictive algorithms derived from simulation data processing.

- Designed and implemented machine learning algorithms that predicted outcomes accurately from complex simulation datasets.

Documentation

Collaboration Skills

LANGUAGES

English — Native

Spanish — Intermediate

MY CAREER

- AI Flight Optimization Intern at University Research Lab (6 Months)
- Machine Learning Project Developer at Student Innovation Lab (3 Months)

- Conducted comprehensive data preparation and feature engineering that significantly improved input quality for AI models.
- Worked collaboratively with peers delivering project results at a university exhibition, receiving commendations for innovative problem-solving approaches.
- Utilized TensorFlow and scikit-learn for model creation, gaining hands-on experience with essential industry-standard tools.
- Presented findings and methodologies during academic seminars, stimulating discussion around the application of AI in aerospace.
- Maintained detailed documentation of the project's progress, ensuring outcomes could be replicated for future academic inquiries.

LEADERSHIP & AWARDS

- Dean's List, University of Oklahoma, Fall 2025
- 1st Place, University Hackathon, Spring 2025

CERTIFICATIONS

- Python for Data Science and AI 2026
- Machine Learning Fundamentals 2026

PROFESSIONAL AFFILIATIONS

- Member, Aerospace Engineering Society, University of Oklahoma
- Volunteer, STEM Outreach Program, University of Oklahoma

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST