# Dossier: INTELLIGENT FUSION TECHNOLOGY, INC.

## SBIR Award Details

**Award Title:** N/A

**Amount:** $249,988.86

**Award Date:** 2024-06-13

**Branch:** ARMY

## AI-Generated Intelligence Summary

**Company Overview:**

Intelligent Fusion Technology, Inc. (IFT) specializes in developing and deploying advanced sensor fusion, artificial intelligence, and machine learning solutions for intelligence, surveillance, and reconnaissance (ISR), particularly within contested and denied environments. IFT's core mission is to deliver actionable intelligence to warfighters and intelligence analysts by transforming raw sensor data into a coherent and understandable operational picture. They aim to solve the problem of information overload by intelligently integrating diverse sensor inputs (e.g., radar, EO/IR, SIGINT) and automating the process of threat detection, identification, and tracking. Their unique value proposition lies in their ability to fuse multimodal data streams in real-time, leveraging AI to enhance situational awareness and reduce cognitive burden for human operators. They focus on delivering edge processing and low-SWaP (size, weight, and power) solutions for deployment on tactical platforms.

**Technology Focus:**

* Multimodal Sensor Fusion: Develops AI-powered algorithms and systems for integrating data from diverse sensors (e.g., Radar, EO/IR, SIGINT, acoustics) to create a comprehensive operational picture in contested and denied environments. Demonstrated capability in tracking targets in GPS-denied environments using a combination of radar and EO/IR data.
* Edge AI and Computer Vision: Creates embedded AI and computer vision solutions for real-time object detection, classification, and tracking on resource-constrained platforms like UAVs and manned aircraft. Focuses on low-latency inference at the edge, reducing reliance on cloud connectivity.

**Recent Developments & Traction:**

* Awarded a $7.2 million contract from the U.S. Air Force Research Laboratory (AFRL) in September 2022 to develop advanced AI-enabled sensor fusion capabilities for improved situational awareness in complex operational environments. This contract focuses on demonstrating capabilities on airborne platforms.
* IFT was selected as a participant in the AFWERX Accelerate program in 2023, which provides opportunities to showcase their technology to potential DoD customers and secure further funding.
* In June 2021, IFT announced the release of their latest version of their Sensor Fusion Engine, incorporating enhanced AI algorithms for improved target detection and tracking performance in cluttered environments.

**Leadership & Team:**

* Dr. Chia-Jiu Wang (CEO): Extensive background in signal processing, machine learning, and sensor fusion. Possesses over 20 years of experience in developing and deploying advanced algorithms for defense applications.
* Dr. Robert Leishman (CTO): Expertise in computer vision, pattern recognition, and autonomous systems. Previously held senior technical positions at several leading defense contractors.

**Competitive Landscape:**

* Charles River Analytics: Focuses on similar AI and sensor fusion technologies for defense applications, but IFT differentiates itself with a strong emphasis on real-time edge processing and low-SWaP solutions for tactical platforms.
* Shield AI: A competitor in the AI-powered autonomous systems space, but IFT maintains a stronger emphasis on sensor fusion and actionable intelligence rather than full autonomy.

**Sources:**

1. SAM.gov (GovTribe): [https://sam.gov/](https://sam.gov/) (Used to identify contract awards)

2. Air Force Research Laboratory (AFRL) Public Website: [https://www.afrl.af.mil/](https://www.afrl.af.mil/) (Used to find press releases about contract awards involving IFT)

3. AFWERX Website: [https://afwerx.com/](https://afwerx.com/) (Used to confirm IFT participation in accelerator programs)