# Dossier: Addiguru, LLC

## SBIR Award Details

**Award Title:** N/A

**Amount:** $74,956.00

**Award Date:** 2024-05-13

**Branch:** USAF

## AI-Generated Intelligence Summary

**Company Overview:**

Addiguru, LLC, based in Chicago, Illinois, is a company focused on developing and deploying artificial intelligence (AI)-powered solutions for additive manufacturing (3D printing) processes. Its primary business is providing real-time monitoring, analysis, and control capabilities for additive manufacturing, helping manufacturers improve part quality, reduce waste, and accelerate production. Their core mission is to optimize and automate additive manufacturing processes, thereby increasing efficiency and reducing costs for manufacturers. Addiguru aims to solve problems such as unpredictable part failures, lengthy manual inspections, and the trial-and-error nature of parameter optimization that plague additive manufacturing. Their unique value proposition lies in their AI-driven approach, which offers automated anomaly detection, predictive maintenance, and closed-loop control, leading to improved print outcomes and reduced operational overhead.

**Technology Focus:**

* Addiguru's core technology centers around proprietary AI algorithms that analyze real-time data from sensors embedded in 3D printers (including thermal cameras, strain gauges, and vibration sensors). These algorithms detect anomalies during the printing process, predict potential failures, and provide recommendations for process adjustments.
* They offer a software platform called "Guru" that integrates with various 3D printing systems. This platform visualizes sensor data, provides real-time feedback to operators, and enables automated process control. The system can reduce scrap rates by up to 80% and accelerate print parameter development by up to 50% according to company claims.

**Recent Developments & Traction:**

* In March 2022, Addiguru secured an undisclosed amount of funding from the US Air Force through the AFWERX program to further develop their AI-driven monitoring and control system for additive manufacturing.
* In 2021, Addiguru was awarded a contract from the US Army to develop a machine learning-based system for real-time monitoring of directed energy deposition (DED) processes for advanced manufacturing of military components.
* Addiguru announced a partnership with Carpenter Technology Corporation in 2020 to integrate their AI platform with Carpenter's additive manufacturing services and materials.

**Leadership & Team:**

* Shuchi Khadikar, CEO: PhD in Materials Science and Engineering and a background in developing advanced manufacturing technologies, including additive manufacturing.
* Bill Peter, CTO: Expertise in machine learning, data analytics, and sensor integration. Previously worked on developing AI solutions for industrial applications.

**Competitive Landscape:**

* Sigma Labs: Sigma Labs also provides quality assurance software for additive manufacturing. Addiguru's differentiator is its focus on AI-driven automated anomaly detection and closed-loop control, whereas Sigma Labs initially focused more on raw data acquisition and analysis, although they are also incorporating AI.
* Identify3D: Identify3D offers software to protect intellectual property in additive manufacturing. While they address a different challenge in AM, they compete in the broader market of software solutions for 3D printing. Addiguru is primarily focused on the process monitoring and control aspect.

**Sources:**

1. [https://addiguru.com/](https://addiguru.com/)

2. [https://www.sbir.gov/sbirsearch/detail/2114631](https://www.sbir.gov/sbirsearch/detail/2114631)

3. [https://www.businesswire.com/news/home/20210429005784/en/Carpenter-Technology-Expands-Additive-Manufacturing-Capabilities-Through-Collaboration-With-Addiguru](https://www.businesswire.com/news/home/20210429005784/en/Carpenter-Technology-Expands-Additive-Manufacturing-Capabilities-Through-Collaboration-With-Addiguru)

4. [https://www.defense.gov/News/Contracts/Contract/2545918/](https://www.defense.gov/News/Contracts/Contract/2545918/)