TECHNICAL CAPABILITY STATEMENT

Polaron Analytics

AI • DATA ANALYTICS • DIGITAL ENGINEERING
R&D • MISSION SUPPORT • SECURITY-CLEARED PROFESSIONALS

SBA CERTIFIED 8(a) SMALL BUSINESS DELIVERING ADVANCED AI/ML, ANALYTICS, SOFTWARE, MODELING & SIMULATION, AND TECHNICAL SOLUTIONS TO FEDERAL AGENCIES

WHO WE ARE

Polaron Technologies, Inc. (DBA: Polaron Analytics) is an SBA-certified 8(a) small business and ISO 9001:2015-certified company providing Professional, Scientific, Technical, and Research & Development services to Federal and commercial clients. Since 2017, we have supported the U.S. Air Force, U.S. Space Force, U.S. Navy, NASA, Department of Energy, and other government organizations through prime and subcontract awards. With a Top Secret Facility Clearance (TS FCL), we provide highly qualified, security-cleared professionals for classified and unclassified missions.

UEI: X3EVW996V971
CAGE: 7Z3N5
DUNS: 080917447

PROPRIETARY PLATFORMS

ARCOGNI

Autonomous Machine Learning Architecture Generator

- Automatically designs, trains, and optimizes ML/DL models
- Accelerates model development for new mission problems
- Supports Computer Vision, time-series, NLP, and multi-modal data
- Reduces development time and computational cost



MatVerse

Integrated Materials & Process Analytics Platform

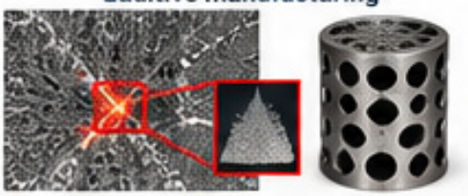
- End-to-end platform for materials, manufacturing, energy, and environmental analytics
- AI/ML models, data management, visualization, and decision support
- Modular architecture for domain-specific applications
- Accelerates R&D and technology transition



MATVERSE MODULES

CLADMA

AI inspection for metal additive manufacturing



- Automated defect detection
- Deep learning with augmentation
- Supports LPBF and other AM processes
- High accuracy (90–98%)

CO2CAP

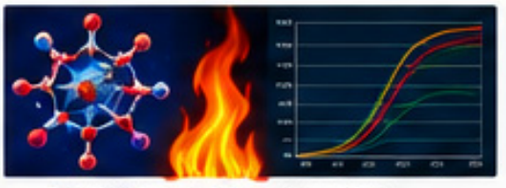
Predictive monitoring + what-if analysis for carbon capture



- Amine emissions forecasting
- Plant performance analytics
- What-if scenario analysis
- Decision support for onsite engineers

POLYCOMPRED

Predict polymer fire response



- Predict thermal decomposition, fire behavior, and various thermal properties
- AI/ML models for polymer systems
- Support low-flammability material design
- Accelerates material development

COMPANY INFORMATION

HEADQUARTERS
9059 Springboro Pike, Ste C
Miamisburg, OH 45342-5063

NATIONAL CAPITAL LOCATION
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www.linkedin.com/company/polaron-analytics/

ESTABLISHED: 2017
STATE OF INCORPORATION: OHIO
BUSINESS TYPE: SMALL
SBA CERTIFICATION: 8(a)
FACILITY CLEARANCE: Top Secret (TS FCL)
ISO CERTIFICATION: 9001:2015

GEOGRAPHIC AREA SERVED:
ALL STATES ACROSS USA

QUALITY COMMITMENT
DELIVERING INNOVATIVE SOLUTIONS WITH INTEGRITY & EXCELLENCE

CONTRACT VEHICLES

SeaPort NxG
Contract Number: N0017825D7696

CDAO AI Talent 2.0
Contract Number: W519TC-25-G-0044

MDA SHIELD
Contract Number: HQ0859260F823

U.S. Small Business Administration
8(a) CERTIFIED
8(a) Source Authority

CORE TECHNICAL CAPABILITIES

AI & MACHINE LEARNING
- Predictive Analytics
- Generative AI / LLMs
- Computer Vision
- Anomaly Detection
- Decision Support Systems

DATA ANALYTICS & DATA ENGINEERING
- Data Integration & ETL
- Data Warehousing
- Dashboard Development
- Business Intelligence
- Statistical Analysis
- Data Governance

SOFTWARE & DIGITAL SOLUTIONS
- Custom Software Development
- Cloud-Native Applications
- API Integration
- DevSecOps Support
- Database Design

MODELING, SIMULATION & DIGITAL ENGINEERING
- Physics-Based Modeling
- Computational Simulations
- Digital Twins
- Additive Manufacturing Analytics
- Materials Informatics
- Optimization Algorithms

RESEARCH & DEVELOPMENT
- SBIR / STTR Execution
- Technology Maturation
- Prototyping
- Experimental Design
- Technology Transition Support

KEY DIFFERENTIATORS

AI-FIRST SOLUTIONS
Developing and deploying AI-enabled solutions for defense, research, engineering, logistics, workforce, manufacturing, and mission-support applications.

PROVEN SBIR/STTR PERFORMER
Successfully executed multiple Phase I and Phase II projects across Air Force, Space Force, Navy, NASA, and DOE.

RESEARCH-TO-OPERATIONS EXPERTISE
Ability to transition innovative technologies from research environments into operational government use.

INTEGRATED TECHNICAL TEAM
Experienced team of cleared professionals with expertise in AI/ML, data science, software engineering, digital engineering, modeling and simulation, and program management.

REPRESENTATIVE FEDERAL PAST PERFORMANCE



SPACE FORCE (PRIME)
STTR Phase II – AI-enabled monitoring and quality assurance for advanced manufacturing systems.
PERIOD OF PERFORMANCE: 2023 – 2024



AIR FORCE (PRIME/SUB)
Logistics analytics and AI solutions, including machine learning, predictive analytics, and decision-support applications.
PERIOD OF PERFORMANCE: 2024 – 2025



NAVY (PRIME)
SBIR Phase I – Artificial intelligence and machine learning for advanced manufacturing and materials applications.
PERIOD OF PERFORMANCE: 2023 – 2024



NASA (PRIME)
Dual-Use Technology Development – Computer vision and deep learning solutions for additive manufacturing quality assurance.
PERIOD OF PERFORMANCE: 2023 – 2024



DEPARTMENT OF ENERGY (PRIME)
SBIR Phase I – Machine learning and predictive modeling for industrial process optimization.
PERIOD OF PERFORMANCE: 2024 – 2025

NAICS CODES

541715	Research and Development in the Physical, Engineering and Life Sciences (except Nanotechnology and Biotechnology)
541330	Engineering Services
541511	Custom Computer Programming Services
541519	Other Computer Related Services
541611	Administrative Management and General Management Consulting Services
541690	Other Scientific and Technical Consulting Services
541713	Research and Development in Nanotechnology
541714	Research and Development in Biotechnology (Exception Nanobiotechnology)
541810	Advertising Agencies
541990	All Other Professional, Scientific, and Technical Services
561990	All Other Support Services

SBA 8(a) SOLE SOURCE CONTRACTING

Federal agencies can award contracts directly to Polaron Analytics through the SBA 8(a) Program without a lengthy competitive procurement process, enabling:

- Accelerated acquisition timelines
- Reduced procurement burden
- Access to specialized AI/ML, data analytics, and engineering expertise
- Rapid mission execution
- Flexible contract structuring

Eligible for SBA 8(a) Sole Source Awards in accordance with current SBA and FAR regulations.

POINTS OF CONTACT



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CUSTOMERS & TEAMING PARTNERS


U.S. AIR FORCE


U.S. SPACE FORCE


U.S. NAVY


NASA


DOE

INNOVATE. ANALYZE. ENGINEER. DELIVER. | EMPOWERING MISSIONS THROUGH DATA AND INNOVATION.