PARSONS®

CENTAR

Collaborative Engineering for Novel Technology and Advanced Research

Course Overview

The Collaborative Engineering for Novel Technology and Advanced Research (CENTAR) course addresses a critical challenge in government software development and software solutions. The slow, costly, and often inefficient process of creating and maintaining software code and support for government users is not capable of keeping pace with modern demands.

This innovative five-to-ten-day flexible program transforms users with limited coding experience into capable problem-solvers who can rapidly develop custom software solutions for unique operational challenges. Whether the solution requires a Single Page Application (SPA), automation script, data processing pipeline, or specialized tool, CENTAR develops hybrid problem-solvers who combine domain expertise with AI-enhanced development to build exactly what's needed when it's needed.

Students train in our state-of-the-art facility featuring a complete DevOps ecosystem including managed GitLab instances, JupyterHub environments, containerized development platforms, partitioned AI models, and full CI/CD pipelines. Our controlled environment provides hands-on experience with production-grade tools while maintaining security standards and development best practices. The curriculum is designed to be vendor and platform agnostic. Students learn to assess problems and build appropriate.

Certification

CENTAR instructors deliver a dynamic learning experience through AI-assisted problem-solving and practical scenarios. Students are challenged to identify real operational problems and develop custom software solutions, combining human creativity with AI-powered tools across multiple development deliverables throughout the course. Upon successfully completing all course requirements, participants earn a certificate demonstrating their proficiency in AI-assisted custom software development and modern DevOps methodologies.

CENTAR Quick Facts:

- Future focused intensive certification course in AI-assisted custom software development for solving unique operational problems and challenges.
- Emphasis on solution-oriented development, enabling students to build SPAs, automation tools, data pipelines, or specialized applications as needed.
- Train at the speed of technology—work with modern frameworks and platforms while learning to assess problems and select appropriate technical solutions.
- State-of-the-art training facility with managed GitLab, JupyterHub, containerized environments, and complete CI/CD pipeline infrastructure.
- Flexible delivery options: available as 5-day, 7-day, or 10-day intensive course formats, or hybrid online/in-person delivery.
- Expert instruction from practitioners with extensive experience in custom solution development, DevOps, and AI-assisted programming.

"The best and most practical 'hybrid development' training I've received from the government or private sector."

– JSOC Communicator

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Day 1	Day 2	Day 3	Day 4	Day 5
• The CENTAR Framework • AI-Assisted Development Setup • Linux Development Environment • GitLab Repository Management • JupyterHub Configuration • Container Platform Basics • Python Development Fundamentals	• Problem Assessment Methods • Solution Architecture Planning • Requirements Gathering • Technology Stack Selection • User Experience Design • Data Flow Analysis • Performance Requirements	• Single Page Applications (SPAs) • Custom Web Interfaces • API Development & Integration • Database Solutions • Data Processing Scripts • Specialized Tools & Utilities • AI-Powered Code Generation Requirements	• Workflow Automation • Task Scheduling Systems • Data Pipeline Creation • Process Integration • Monitoring & Alerting • Batch Processing • Report Generation	• CI/CD Pipeline Setup • Cloud Platform Deployment • Infrastructure as Code • Monitoring & Logging • Automated Testing • Production Maintenance

Delivery

COA #1: 10-Day Comprehensive Program

Complete program covering problem assessment, solution design, and custom development using our managed GitLab and JupyterHub infrastructure for real-world project implementation.

COA #2: Hybrid Online/In-Person (7-Day)

2-day online foundation training covering Linux and Python basics, followed by 5-day intensive in-person custom solution development using our state-of-the-art DevOps facility.

COA #3: Accelerated 5-Day Course

Fast-track program focusing on AI-assisted development techniques and rapid custom solution deployment for users with existing technical background.

Missions and Skills Supported

Parsons TOG instructors bring specialized training and a wealth of experience in analyzing PAI across the Department of Defense, Intelligence Community, law enforcement, and the private sector. Our diverse clientele includes leading corporations, universities, and elite special operations units, all benefiting from our expertise in supporting a wide range of complex missions and problem sets.

- All Source & Open-Source Intelligence
- Civil Affairs
- Counter-Terrorism
- Counter-Threat Finance
- Counterintelligence
- Digital Communications
- Force Protection
- Identity Management & Signature Reduction
- Information Operations
- Military Deception
- Operational Security
- Preparation of the Digital environment
- Public Affairs
- Targeting
- Threat Intelligence

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More Info and Enrollment!

We offer various options to create a contracted, dedicated course to meet your organization's operational requirements. For contracted training and price quotes please send all inquiries to:

TOGTraining.parsons@parsons.us

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