U.S. Army Futures Command
Emerging Technology Opportunities Catalog Fiscal Year 2024

1. This catalog is intended to provide information on Fiscal Year 2024 (FY24) United States Army Futures Command, Emerging Technology Opportunities (AFC ETO) for the Army Software Factory (ASWF) and Army Artificial Intelligence Integration Center (AI2C), Artificial Intelligence Technician (AI Technician) Programs. Upon program completion, candidates will receive an Additional Skill Identifier (ASI), which provides assignment opportunities for high demand, low density, positions as an Emerging Technology Leader. Enlisted Soldiers attending the Fiscal Year 2024 or later programs of the ASWF or the AI Technician Program, will incur a 36-month service-remaining requirement upon receipt of the ASI in accordance with MILPER Message 23-348, Update to Service Remaining Requirements (SRR) for Army Futures Command Emerging Technology Training Opportunities, Issued: 22 August 2023. Enlisted Soldiers must reenlist prior to PCS to meet the SRR. Indefinite Soldiers must sign acknowledgment that they will not be afforded voluntary retirement until their SRR obligation is complete. Officers incur a three-for-one (3:1) active-duty service obligation (ADSO) computed in days, for each day in this program until receipt of their ASI, in accordance with AR 350-100, Officer Active-Duty Service Obligations, 26 September 2017. Both Enlisted and Officer Personnel must obtain their technical ASI within 12 months from program start date or they will be released to the needs of the Army.

2. This catalog is descriptive in nature and should not be interpreted as a regulation or policy. This information will assist in determining preferences in choosing a program. Qualifications, academic achievements, program sponsor guidance, and other key factors will be taken into consideration during selection. This catalog is for Active-Duty Army personnel unless otherwise stated.

3. CONTENT:

a. U.S. Army Software Factory (Cohorts 24-02 and 25-01)

b. AFC Artificial Intelligence – Technician program (Cohort 5)

Program	Location	Eligible to Apply	Application Suspense Date	Program Start Date	Assignment Length
Software Factory Cohort 24-02	Austin, TX	SGT-SFC; CW2-CW3; 1LT-MAJ	31 OCT 2023	JUL 2024	24 Months
Software Factory Cohort 25-01	Austin, TX	SGT-SFC; CW2-CW3; 1LT-MAJ	31 MAR 2024	JAN 2025	24 Months
AI Technician Cohort 5	Pittsburgh, PA	SGT-SFC; CW2-CW3; 1LT-MAJ	31 OCT 2023	AUG 2024	36 Months

2. General guidance for applicants of AFC Emerging Technology Opportunities.

a. You are ineligible to apply if:

(1) You will be a student enrolled or attending an Army course during the time your requested program is in session.

(2) You owe or will not complete an incurred utilization assignment by the start of your requested program.

(3) You do not have 12 months at current duty station prior to start date of selected program.

(4) You are on Assignment Instructions, or a Request for Orders to PCS, during the application process (any time prior to notification). PME that concludes prior to the start date of program is not a disqualifier.

(5) Not able to meet service obligation requirements due to remaining time in service eligibility (e.g., MRD, RCP, etc.).

(6) You have derogatory information in the performance section of your permanent records within the past three years or a Type I offense (IAW HQDA EXORD 193-14, Annex B) at any point.

(7) You are not an active-duty Soldier (An exception to policy may be requested for the AI2C AI Technician applicants only).

3. How to apply: The submission requirements for each program are listed below and submitted through the Army Software Factory (Navigate to “Who We Are> Supporting Commands > Army Software Factory”) or the AI2C Community Educational Opportunities (sharepoint-mil.us) by the submission deadline in this catalog. You must notify your assignment career/manager when submitting your application.

a. All applicants must follow the AFC-ETO application process outlined in the individual program input below.

b. Applicants are responsible for updating their iPERMS account and Soldier Talent Profile.

c. Applications or information received after the suspense date will not be accepted or included in the application packet. Any application packet that is not complete, as defined in this catalog, may result in missing the submission suspense date and candidate may not be considered for the opportunity.

U.S. Army Futures Command – Army Software Factory

(Austin Community College, Rio Grande Campus, Austin, TX)

1. Program Description:

a. Overview. The Army Software Factory Program is an immersive, in-person program to develop intermediate software capabilities in Austin, TX. It consists of three phases with a total program length of 24 months. The Army Software Factory collaborates with academic and industry partners to execute this program. The program is open to most grades and occupational specialties of Soldiers. The program is focused on arming Soldiers with modern software skills to solve Army problems using software while harnessing the innovative spirit of the US Army Soldier.

(1) The program is designed to attract approximately 25 participants for each cohort. This announcement is for Cohort 24-02 (starting July 2024) and Cohort 25-01 (starting December 2024). Participants will apply to and be assigned to one of the following tracks: software engineering, user interface / user experience (UI/UX) design, platform engineering or product management. The first phase consists of a six-month technical accelerator (technical boot camp) to baseline foundational skills for the selected track. The second phase consists of a six-month experience in which product teams are formed within the cohort and each participant is paired with subject matter experts to further develop the foundational skills built in the first phase. The teams use agile software development processes and Soldier-centered design to scope and solve existing Army problems via full-stack development. Upon the completion of this phase, individuals must meet the standard to attain the ASI. The end of phase two also marks the end of the baseline training portion of the program used to calculate the service obligation (where applicable) and culminates with the attainment of the technical ASI. This initiates the third phase where participants advance their skills mastery from “junior” up to “intermediate,” leveraging application team work on Army problems, and iterate as needed. This phase may include collaborations with industry and/or academia. Some Soldiers may be offered opportunities to reach “senior” certification and stay at the ASWF beyond this 24-month assignment, to train, mentor and develop incoming cohorts and/or serve in operational roles at the ASWF.

(2) Commanders and supervisors are encouraged to disseminate this prestigious opportunity to outstanding candidates based on their potential and aptitude for service in the emerging technology environment.

(3) In accordance with the Secretary of the Army’s Memorandum, dated 29 MAY 2020, AFC oversees the development and operation of this new initiative.

b. Purpose. The Army Software Factory's mission is to prototype a future force design and empower Soldiers to solve problems through software engineering at the edges of the battlefield while upskilling the Army's technical competencies. Supporting this mission are three enduring aspects of this effort outlined below. The end state is to provide the Army with a scalable organic capability that enables Soldiers to scope and develop software with maximum autonomy at the edges of the battlefield without undue reliance on contracted support while forging positive change across a series of legacy processes.

c. Lines of effort to build this capability are:

(1) Increase digital proficiencies across the Force, enabling Soldiers to dominate an information-centric battlefield.

(2) Solve current Army problems by leveraging Agile, DevSecOps cybersecurity practices, and cloud technology.

(3) Harness the innovative spirit of the country through the close collaboration with industry and academia.

d. Tracks. There are four tracks participants can apply for, as described below.

(1) Product Manager: Product Managers are charged with balancing user needs, organizational outcomes, and technical feasibility in order to build value quickly while still considering the big picture. Our teams are flat and balanced, with Developers, Designers, Product Managers, and Platform Engineers working in concert, empowered to build the software we know our soldiers need. As product manager you will write user stories to describe new features Designers have identified through user interviews, oversee the product's backlog, and validate what the Developers have delivered. You work to keep the team unblocked and de-risked using hypothesis-driven development.

(2) User Experience / User Interface Designer: UX/UI Designers ensure application teams are building products that meet user needs. Sometimes referred to as an "Empathizer in Chief", UX/UI Designers act as the main conduit to the user. Designers cover a wide variety of skills to be successful including user research, experience and interaction design, as well as visual design. By practicing Soldier Centered Design (SCD), designers act as an intelligent filter for user feedback and ensure that their teams tackle the highest user priorities. As a part of a Balanced Team with Product Managers and Engineers, designers work collaboratively with their

teammates to determine design priorities, refine a backlog and roadmap, and validate the technical complexity of their designs.

(3) Software Development Engineer: Software Development Engineers are “full-stack” engineers. They design, develop and deploy applications with a focus on high availability, low latency and scalability. Software Development Engineers implement user stories from the backlog and write tests before they write production code. Testing first gives engineers confidence and ensure software is free of bugs or security vulnerabilities. Since engineers work with a balanced-team approach, they provide inputs on complexity and architecture decisions to the product team members. Software Engineers also practice eXtreme Programming (XP), in which pairs of engineers work together on the same line of code to share context and knowledge transfer.

(4) Platform Engineer: Platform Engineers play a major role in developing, managing, configuring, and securing platforms on which all applications rely. They automate the installation, configuration and maintenance of services on the Army Software Factory platform. Platform Engineers manage system-level performance tuning to optimize for reliability and efficiency and guide software releases and activations for new features and platform configuration. You will ensure all applications that are deployed are secure, reliable, and resilient.

e. Program Outline. Below is a tentative schedule for the program. AFC will design the final syllabus and schedule for the program in consultation with relevant stakeholders to best fit the needs of the participants and the U.S. Army. The overall concept is outlined in the figure below.

(1) Phase 1: Technical Accelerator**.** The pipeline begins with a six-month (approximate) onboarding and technical accelerator for each track.

(2) Phase 2: Paired Programming**.** 1-on-1 vendor/Subject Matter Expert (SME)-led pairing and enablement begins immediately following the technical accelerator. This methodology is akin to learning a foreign language by pairing personnel who are extremely proficient in all elements of that foreign culture. In this phase participants are broken out into product development teams of approximately six personnel or join the platform team. The product teams consist of a Product Manager (PM), User Interface / User Experience (UI/UX) Designer, and Software Development Engineers. Each cohort member pairs with a full-stack software engineer, UI/UX designer, or PM trained in enabling others to learn. The focus is not on classroom academics, but rather on learning while solving an Army problem. This pairing lasts six-months while cohort members operate as part of a modern software team to learn both coding and the right

way to scope and manage agile software projects. Throughout this time, the participants may conduct consultant-like site visits across the Army to scope the problem and iterate solutions and develop a software solution that solves an Army problem with the highest level of modern rigor. This phase ends with an assessment to attain the technical ASI.

(3) Phase 3: Sustained Factory. At the conclusion of the pairing experience, ASI-holding team members are now baseline proficient in modern software development. They have accrued 12 months of baseline cumulative academic and project experience. At this point they enter an operational training and development phase of their progression at the Software Factory and continue to work on Army problems. This phase may include collaboration with startups and/or academia for mutually beneficial co-development. The overall objective is to take a Soldier from the "regular Army" and get them acclimated to modern software engineering. Cohort members are now able to pair together and augment other teams as needed. After a total of 24-months, participants embark on a utilization tour to continue employment as software development teams.

2. Selection Process:

a. All applications will be reviewed by a diverse board. The top applicants will be invited for a behavioral and technical interview. This may be virtual or in-person. There may be additional assessments as required. None of the assessments require expert knowledge in the specific tracks. However, research on the various tracks within the Army Software Factory is highly recommended.

b. Final Order of Merit List and selection is built in coordination with Army Human Resources Command (HRC) and to consider diversity of rank, MOS, skillsets and other factors.

3. Program Tenure/Location:

a. During the Army Software Factory Program, cohort members will be assigned (via PCS) to the U.S. Army Software Factory in Austin, TX, with an in-person work location at the Austin Community College, Rio Grande Campus.

b. The Army Software Factory is not co-located with a typical garrison support structure. All Soldiers will live in the economy with Basic Allowance for Housing (BAH) levels for Austin, TX. Additionally, there are not typical support items such as Military Treatment Facilities (MTFs), Child Development Centers (CDCs), or Army

Community Services (ACS) within AFC or Austin, TX. This is a voluntary opportunity, and you should consider these factors before applying to the program.

c. Follow-on Assignment Opportunity Detail. Some service members will be offered follow-on utilization opportunities provided successful completion of the program and Army availability. Assignments are expected to be similar in nature, where Soldiers work as part of a software development team building software solutions for problems within the Army. Some service members may be offered opportunities to stay at the ASWF to train, mentor and develop incoming Soldier cohorts.

4. Eligibility Criteria: All applicants are required to have at least two years of time in service, but no more than 16 years by the start date of the program.

a. Officers and Warrant Officers must meet the additional criteria in paragraph 4.c. below.

b. Noncommissioned Officers (NCO) and Enlisted:

(1) All applicants must have completed all requisite levels of NCOES for their rank to include their distributed leader course.

(2) Applicants are still eligible for consideration under the qualitative service and qualitative management program.

(3) GT score of 110 or higher.

(4) Meet the additional criteria in paragraph 4, c below.

c. All Candidates:

(1) Active Component Soldiers and MOS immaterial.

(2) Meet Army height and weight and physical fitness standards.

(3) Not be pending any adverse actions or under investigation.

(4) Must meet all requirements for reenlistment and/or continued service.

(5) Have interpersonal skills and the ability to interact and form relationships with individuals from diverse backgrounds.

(6) Be able to begin the Army Software Factory (Emerging Technology Opportunity) on or about July 2024 for Cohort 24-02, and on or about December 2024 for Cohort 25-01.

(7) Currently have an adjudicated SECRET security clearance.

5. How to apply: The Emerging Technology Opportunity Catalog Fiscal Year 2024 is published at Army Software Factory (Navigate to “Who We Are> Supporting Commands > Army Software Factory”). You MUST notify your assignment manager when submitting your application at Army Software Factory Application. Components of the application are outlined below:

a. Online application and self-certification.

b. Letters of recommendation (LOR) must include:

(1) Battalion Commander,

(2) Supervisor,

(3) Peer, and

(4) Former Subordinate

c. Your references will need to input your DoD ID number when filling out the form. References should submit their recommendations through the applicant portal site, listed above. Recommendations in other formats will not be considered.

d. Soldier Talent Profile (redact photo and demographics).

e. Evaluations: Two (2) most recent Officer Evaluation Reports (OER) or Noncommissioned Officer Evaluation Reports (NCOER). If you do not have two formal evaluations, submit a MOR of performance signed by your current supervisor. Include a reason you do not have two evaluations (e.g., recently promoted to E-5).

f. DA Form 5500 or DA Form 5501 - Army height/weight record (within the past six months). Form with admin data must be submitted even if you are within HT/WT standards.

g. DA Form 705 ACFT card within the last six months.

6. All service members will conduct height and weight and ACFT upon arrival.

7. Points of Contact:

a. Software Factory POC: Army Software Factory Recruiting Team at cohort-applications@swf.army.mil

AFC Army Artificial Intelligence Integration Center – Artificial Intelligence Technician Program

(Carnegie Mellon University, Pittsburgh, PA)

1. Program Description:

a. Overview. The Army Artificial Intelligence Technician (AI Technician) Program is an intensive 36-month program that combines a 36-week Artificial Intelligence Cloud Administration, Programming with Python, Data Engineering, and other certifications at Carnegie Mellon University in Pittsburgh, PA, with a 24-month hands on experience, project-based learning with the Army Artificial Intelligence Integration Center (A2IC), Artificial Intelligence Factory (AI Factory). The program seeks Service Members who have demonstrated outstanding promotion potential. Officers (commissioned / warrant) and noncommissioned officers striving to be front-runners in preparing the operational force for AI-enabled capabilities are encouraged to apply for the AI Technician Program. Commanders and supervisors are also encouraged to submit their best candidates for this opportunity based on the outstanding potential and aptitude for service in the emerging technology environment.

b. Artificial Intelligence Technician Program Course Overview. Students will gain knowledge and develop hands-on experience solving real-world problems in:

(1) Cloud administration: Includes process to provision, orchestrate, scale, manage and monitor cloud services across compute, storage, networking, and security using various cloud interfaces. Projects use existing public cloud infrastructure, tools, and services.

(2) Practical Programming with Python:

(a) Includes types, variables, functions, iteration, conditionals, Python data structures, classes, objects, and modules.

(b) Learn several Integrated Development Environments (IDEs—IDLE), VS Code, Jupyter Notebook, basic Input/Output operations, and fundamental software development.

(c) Work on three larger applications - enterprise data manipulation (flat files, data stores), web application backend, and data analysis (visualization, matching).

(3) Data Engineering:

(a) Includes ingesting, egressing and transforming data from multiple sources using various technologies, services and tools.

(b) Develop skills needed to identify and meet data requirements of an organization by designing and implementing systems and data pipelines that manage, monitor and secure the data using the full stack of cloud services.

(c) Students explore and experiment with various storage abstractions such as SQL and NoSQL databases, data lakes and data warehouses to store, transform and draw insights from data.

(4) Cloud DevOps:

(a) Design and implement strategies for application and infrastructure that enable continuous integration, continuous testing, continuous delivery, infrastructure as code as well as monitoring.

(b) Students will leverage cloud technologies to design and implement solutions to version control, building, testing, release, provisioning, configuration, deployment, and monitoring.

c. Orientation and Academics. Selected participants begin with an orientation program, which prepares them for the AI Technician course at Carnegie Mellon University. The curriculum exposes students to all aspects of Cloud Engineering. Participants will utilize experience gained to participate in artificial intelligence projects to familiarize them with programming, cloud architecture and data management. Candidates will be exposed to Army Futures Command's Modernization Enterprise to include visits to Cross Functional Teams and Army Labs within U.S. Army Combat Capabilities Development Command. Ultimately, candidates will be equipped for and understand "Big Picture" objectives of training the Army's Operational Force.

2. Selection Process:

a. The U.S. Army Futures Command (AFC) FY24 Army AI2C, Technical Selection Panel will convene during November 2023 to select candidates to present to the Director, AI2C, for decision.

b. Applicants will be notified of the AFC AI2C Selection Panel results not later than 15 Feb 2024.

c. Final OML and selection is built in coordination with HRC and to consider diversity of rank, MOS and skillsets and other factors.

3. Program Tenure/Location:

a. During the AI Technician Program, participants are assigned to the AI2C at Carnegie Mellon University, Pittsburgh, PA.

b. The AI2C is not co-located with a typical garrison support structure. All Soldiers will live on the economy with BAH levels for Pittsburgh, PA. Additionally, there are not typical support items such as MTFs, CDCs, or ACS. This is a voluntary opportunity, and you should consider these factors before applying to the program.

c. Course work begins in August 2024 and completes August 2025. A required 24-month utilization tour begins August 2025 and ends August 2027.

d. Utilization Tour Detail. AI Technicians are the data wranglers, who make sure the information pipelines are working. AI Technicians solve real-world problems in the emerging technology environment.

4. Eligibility Criteria: (Non-Waivable, unless specifically stated)

a. Active Component Company Grade Officers and Warrant Officers (Highly competitive Reserve Component Soldiers may be considered):

(1) Must have successfully completed at least one "Key Developmental Assignment" IAW DA Pam 600-3, for 1LT or CW2.

(2) Meet the additional criteria in paragraph 4.c.

b. Noncommissioned Officers (NCO):

(1) Active Component (Highly competitive Reserve Component Soldiers may be considered)

(2) Hold the rank of Sergeant (SGT) (E-5) through Sergeant First Class (SFC) (E-7). Other ranks may be considered on a case-by-case.

(3) All applicants must have completed all requisite levels of NCOES for their rank to include their distributed leader course.

(4) Applicants are still eligible for consideration under the qualitative service and qualitative management program.

(5) Meet the additional criteria in paragraph 4.c.

c. All Candidates:

(1) Active Component Soldiers, Rank and MOS immaterial (Highly competitive Reserve Component Soldiers may be considered):

(2) Meet army height and weight requirements and be in excellent physical condition.

(3) Not be pending any adverse actions or be at risk for promotion.

(4) Have extraordinary potential for future Army service.

(5) Have interpersonal skills and the ability to interact and form relationships with individuals from diverse backgrounds.

(6) Be able to begin the AI Technician Program (Emerging Technology Opportunity) on or about August 2024.

(7) Able to meet the minimum 36-month SRR upon graduation.

5. How to apply:

a. The submission requirements are submitted through the following link: PA_AI_Technician_Application_Submission_App-Prod - Power Apps (appsplatform.us)

b. You must be on a government computer and have a CAC to access the portal. Additionally, you may request a manual application by emailing usarmy.pittsburgh-pa.afc-ai2c.mbx.workforce-development@army.mil

c. You MUST notify your career/assignment manager when submitting your application. Components of the application are outlined below:

d. Online application.

e. Two Letters of Recommendation (LOR)**:**

(1) Current Supervisor, and

(2) Letter of Recommendation from a reference who can address your technical capabilities.

f. Soldier Talent Profile (attached to the online application).

g. Most recent evaluation report (attached to the online application).

h. Army Combat Fitness Test scorecard (attached to the online application).

i. If applicable, current, within the past six months, DA Form 5500 / 5501 Body Fat Content Worksheet (attached to the online application).

6. Points of Contact:

a. AI2C POC: Ms. Jacqui Coffman at jacqueline.m.coffman.civ@army.mil

b. AI2C POC: LTC Michael Michell at michael.a.michell2.mil@army.mil