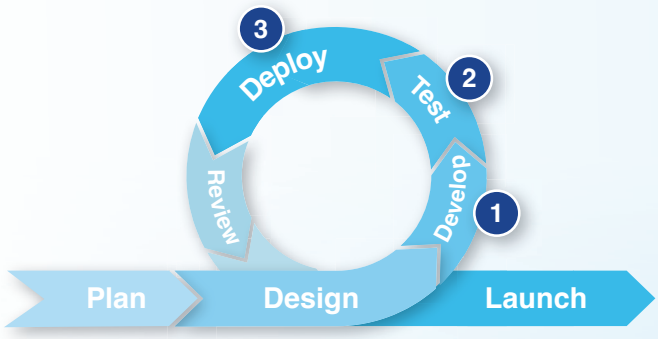
SECMATION

Digital Engineering for Rapid Development

Deploy Complex Software Faster with Secmation's Digital Engineering Technologies

WHEN QUICKLY DEPLOYED into the hands of the warfighter, novel software solutions to hard problems create an asymmetric effect on the battlefield. Rapidly evolving technologies in these areas, like the integration of Artificial Intelligence (AI), pose challenges to developers including development/certification timelines and cybersecurity threats. Digital Engineering (DE) techniques are necessary to rapidly develop and test the next generation of software capabilities. Technologies developed using DE must also be quickly translated from simulation to reality to provide real-world validation without compromising cybersecurity. Secmation's DE technologies enable a true DevSecOps workflow that accelerates the development cycle for complex software solutions like Artificial Intelligence while integrating cybersecurity protections.



1. **Accelerate development by enabling distributed work not dependent on hardware**
2. **Reduce cost and cycle time of testing through connections to MBSE/M&S toolsets**
3. **Deploy faster and cheaper with a direct path from DE to advanced processing hardware**

SECMATION provides a unique approach to Digital Engineering which leverages processor Digital Twins capable of executing high-fidelity, real software and firmware, including the execution of AI models, in a digital environment. Connections to Model-Based Systems Engineering (MBSE) and Modeling and Simulation (M&S) toolsets allows synthetic training of AI models and rapid validation of capabilities. The high-fidelity Digital Twin allows direct deployment to relevant, secure hardware, reducing the time required to move from simulation to a deployable capability. Secmation's solution builds cybersecurity into the development process from the beginning, ensuring solutions are ATO-ready out-of-the-box.

KEY FEATURES

- High-fidelity Digital Twin for real SW development independent of HW
- Connection to mission simulation tools for rapid evaluation of software
- Reduce SW development costs by up to 50% with fully digital SW pipeline
- Direct deployment from Digital Engineering to military-relevant hardware
- Support for secure execution of Artificial Intelligence models
- Rapid development, test, and release cycles with built-in security (DevSecOps)

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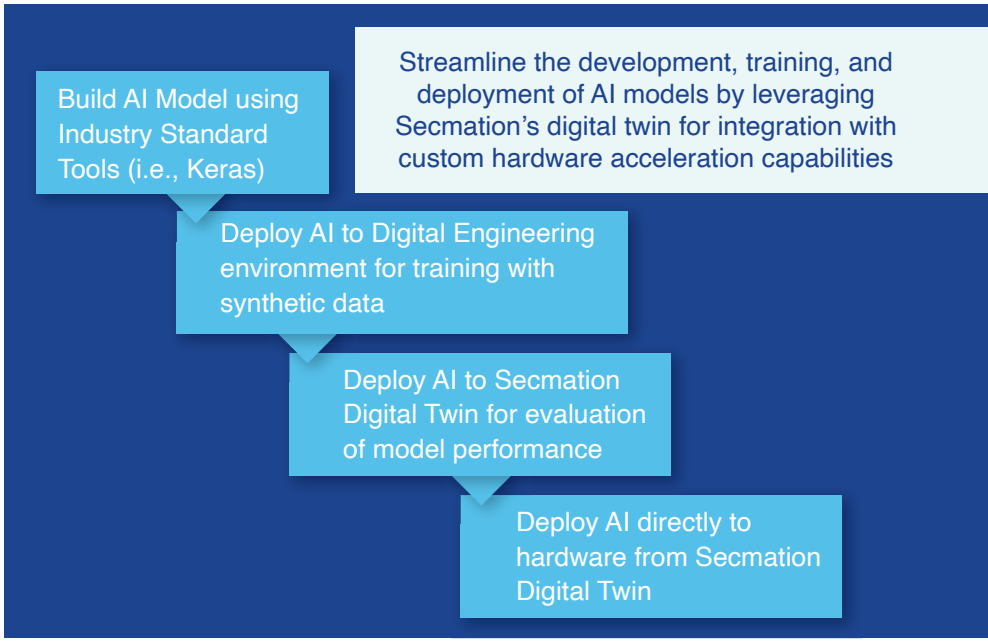
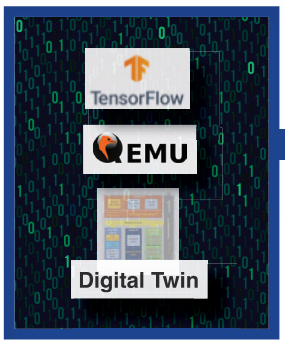
AI-Enabled DevSecOps

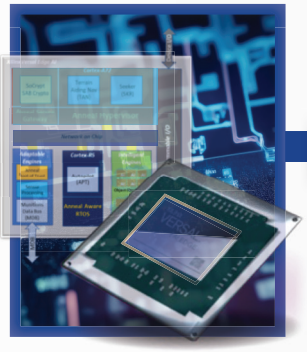
SECMATION'S Digital Engineering technology allows advanced AI models to be integrated into a true DevSecOps workflow. Third-party integrations with industry standard AI development tools like Tensorflow and Keras provide a streamlined way to integrate AI models into the Digital Engineering environment. The use of a high-fidelity Digital Twin means that AI models can execute on emulated acceleration hardware, allowing developers insight into the true performance of the models in a relevant environment. The connection to M&S toolsets in Secmation's Digital Engineering ecosystem means developers can use real data to train and evaluate AI models.



Rapid Deployment to Secure Hardware



Secmation DE Environment Allows Rapid Maturation of Capabilities



High-Fidelity Digital Twin Enables Low Risk/Cost Transition to Secure Military Grade Processing Hardware

Low Risk/Cost Hardware Transition Provides Path to Rapid Deployment of Capabilities

A KEY ADVANTAGE of the high-fidelity Digital Twin developed by Secmation is enabling a rapid transition from simulation to real hardware. The inclusion of high-fidelity software and firmware in the DE model increases model fidelity significantly, reducing the time to translate DE enhanced MBSE designs to military grade computing hardware by significantly reducing the need for re-coding/re-validation. This efficient transition enables rapid test and evaluation cycles which "close the loop" to validate the DE models and provide a low-risk path for operational deployment to the warfighter.

Cybersecurity Continuously Built In

SECMATION'S Digital Twin allows the application of cybersecurity controls throughout the development process, not just at the end of the cycle. Highfidelity emulation of hardware interfaces along with high-fidelity software and firmware allow real cybersecurity controls to be applied and tested during the standard development cycle. This integration of cybersecurity controls allows the security of the system to evolve with the rest of the capability sets instead of being developed independently, increasing efficiency and reducing cost of applying cybersecurity. The result is a direct-to-hardware deployable package with interwoven cybersecurity ready for certification.

Secmation's Digital Twin enables rapid development and test cycles, reducing the time and cost required to develop complex software products