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Intel Accelerates AI Development with Reference Kits

Optimized AI reference kits help developers and data scientists innovate faster.

SANTA CLARA, Calif.--(BUSINESS WIRE)-- **What's New:** Intel now offers a set of 34 open source AI reference kits to the community, the result of ayearslong collaboration with Accenture, enabling developers and data scientists to deploy artificial intelligence (AI) faster and more easily. Each kit includes model code, training data, instructions for the machine learning pipeline, libraries and oneAPI components to optimize AI and make it accessible to organizations in multiarchitecture on-premises, cloud and edge environments.

This press release features multimedia. View the full release here: https://www.businesswire.com/news/home/20230724121115/en/

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> *"Intel AI reference kits give millions of developers and data scientists an easy, performant and cost-effective way to build and scale their AI applications in health and life sciences, financial services, manufacturing, retail and many other domains. Intel is committed to enabling an AI everywhere future through not just our portfolio of AI-accelerated processors and systems but also our contributions to an open AI software ecosystem. The reference kits are built using components of Intel's AI software portfolio and on the foundation of the open, standards-based, oneAPI multiarchitecture programming model."*
> –Wei Li, Ph.D., Intel vice president and general manager of AI and Analytics

Why It Matters: Built on the oneAPI open, standards-based, heterogeneous programming model and components of Intel's end-to-end AI software portfolio, such as Intel® AI Analytics Toolkit and the Intel® Distribution of OpenVINO™ toolkit, the reference kits enable AI developers to streamline the process of introducing AI into their applications, enhancing existing intelligent solutions and accelerating deployment. The result is proven performance improvements with a shorter, more productive workflow versus a traditional model development workflow.

The preconfigured kits simplify AI development for solutions across industries including consumer products, energy and utilities, financial services, health and life sciences, manufacturing, retail and telecommunications. Here is a sample of some of the benefits across industries:

- Using the AI reference kit designed to set up interactions with an enterprise

conversational AI chatbot, users can experience inferencing in batch mode up to 45% faster with oneAPI optimizations.[1]
- The AI reference kit designed to automate visual quality control inspections for life sciences demonstrated training up to 20% faster and inferencing 55% faster for visual defect detection with oneAPI optimizations.[2]
- To enable developers to predict utility asset health and deliver higher service reliability, there is an AI reference kit that provides up to a 25% increase in prediction accuracy.[3]

AI reference kits can reduce the time to solution from weeks to days, helping data scientists and developers train models faster and at a lower cost by overcoming the limitations of proprietary environments. AI tools and optimizations powered by oneAPI maximize portability for open accelerated computing applications.

“Collaborating with Intel to build AI reference kits for the open source community has led to more productive AI workloads for our clients,” said John Giubileo, managing director, Accenture. “The kits, built on oneAPI, are designed to offer developers a portable and efficient solution for AI projects, which reduces project complexity and the time to deployment across industries.”

What’s Next: Through community feedback, along with contributions, select kits will continue to be updated. Specific kits include visual quality inspection, enterprise conversational AI chatbot setup, predictive asset health analytics, medical imaging diagnostics, document automation, AI-structured data generation and others. Download for free by visiting the Intel web page or on GitHub.

More Context: oneAPI Dev Summit for AI | oneAPI | Intel AI Tools | Now Available: 12 New AI Reference Kits (for a Total of 34!) (Intel Blog) | Now Available: 6 New AI Reference Kits (Intel Blog) | Scale AI with Six New Optimized, Domain-Specific Reference Kits(Intel Training Video) | New AI Reference Kits Enable Developers & Data Scientists in Scaling ML/DL Models (Intel Blog)

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[1] https://github.com/oneapi-src/customer-chatbot

[2] https://github.com/oneapi-src/visual-quality-inspection

[3] https://github.com/oneapi-src/predictive-asset-health-analytics

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