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Job Number	Client	Project Name	Contact	Date	Version
30-274-03	insight.tech	OpenVINO 2022.3 Blog	Lindsay Brown	12/27/22	3

Working Title

Top 6 Things You Need to Know About the OpenVINO™ 2022.3 LTS Release

关于 OpenVINO™ 2022.3 LTS 你需要知道的 6 件事

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Get ready to unpack the latest long-term support (LTS) release of the Intel® Distribution of OpenVINO™ Toolkit this new year. Wherever you are on your AI programming journey—if you want to quickly and easily develop, or learn how to develop, world-class AI applications and deploy deep learning inferencing workloads from edge to cloud—you will want to know all about this latest update of the AI inferencing toolkit.

新年里准备好打开 Intel® OpenVINO 的最新长期支持（LTS）版本™了吗？无论你身处 AI 编程之旅的何处，如果你想快速轻松地开发或学习如何开发世界级的 AI 应用程序，并将深度学习推理工作负载从边缘部署到云端，你都会想了解这个 AI 推理工具套件的最新更新。

1. **What is an LTS release and how does it differ from other releases?**
1. **LTS 版本和其它版本的区别是什么?**

In the software industry, an LTS release is one whose main focus is to expand or consolidate features already introduced in the previous releases of the same product and guarantee long-term support for them. It provides AI developers with one year of bug fixes and two years of security patches from the date of the official release.

在软件行业中，LTS 版本的重点是扩展或整合同一产品的先前版本中已经引入的功能，并保证对这些功能的长期支持。从正式发布之日起，它为 AI 开发者提供了一年的 bug 修复和两年的安全补丁。

While the price to pay for this stability and longevity is that there are no additional features to such releases for their entire life cycle, the good news is that all the new capabilities introduced to OpenVINO this year will be included in the 2022.3 LTS release. Those features include dynamic shapes, automatic batching, performance hints, the AUTO plugin, and support for Intel's new discrete GPUs (Intel® Arc™ and Flex Series) as well as 6th to 13th generation Intel® Core™ processors.

尽管为这种稳定性和寿命付出的代价是，此类版本在其整个生命周期内没有额外的功能，但好消息是，OpenVINO 今年引入的所有新功能都将包含在 2022.3 LTS 版本中。这些功能包括动态输入、自动批处理、性能优先、AUTO 插件以及对 Intel 新的独立显卡（Intel®Arc™ 和 Flex 系列）以及第 6 代至第 13 代 Intel®Core™ 处理器的支持。

The LTS also includes the new API 2.0, which was introduced in OpenVINO 2022.1 earlier this year and designed to make it easier for AI developers to adopt and maintain code. More information on the API 2.0 and how to transition is available here.

LTS 版本还包括新的 API 2.0，它于今年早些时候在 OpenVINO 2022.1 中引入，旨在使 AI 开发者更容易采用和维护代码。有关 API 2.0 以及如何转换的更多信息，请参见此处。

2. **What is new in the OpenVINO™ 2022.3 LTS release?**
2. OpenVINO™ 2022.3 LTS 中有哪些新特性?

In addition to an integrated, stable, and well-tested release of the toolkit's 2022 updates, OpenVINO 2022.3 LTS comes with support for additional deep learning models and devices.

除了集成、稳定且经过良好测试的 2022 工具套件更新版本外，OpenVINO 2022.3 LTS 还支持更多的深度学习模型和设备。

AI developers will find broader support for transformer-based natural language processing (NLP) models like GPT and OpenAI Whisper, and others models like Stable Diffusion (**Figure 1**); improved portability and performance enhancements; an integration with Hugging Face Optimum; new Jupyter notebook tutorials for YOLOv7, Style Transfer (**Figure 2**), and 3D Point Cloud Segmentation (**Figure 3**); and more.

AI 开发者将发现更广泛的对于基于 transformer 的自然语言处理（NLP）模型的支持，如 GPT 和 OpenAI Whisper，以及其它模型的支持，如 Stable diffusion（图 1）；改进了可移植性和性能提升；与 Hugging Face Optimum 集成；加入了新 Jupyter notebook 示例教程，如 YOLOv7、样式转换（图 2）和 3D 点云分割（图 3）的；以及更多。

Figure 1. Stable Diffusion generates complex artistic images based on text prompts. For example, butterfly partly on top of a snowy mountain.

图 1. Stable diffusion 基于文本提示生成复杂的艺术图像。例如，蝴蝶部分在雪山上。

Figure 2. Style Transfer blends a single style into a given image.

图 2. 给定图片运行样式转换

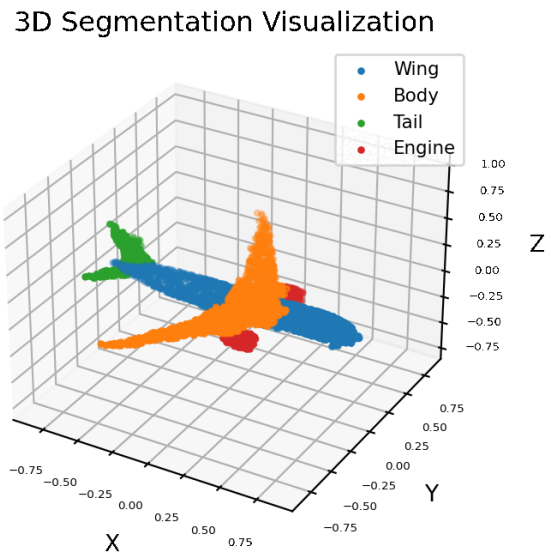

Figure 3. 3D Segmentation Visualization uses OpenVINO™ to consume point cloud data and perform inferences.

图 3. 使用 OpenVINO™ 以消耗点云数据并执行推理 3D 分割可视化

3. **What type of hardware support does this release offer?**
   这个版本提供哪些硬件支持？

On the hardware side, the short story is that OpenVINO 2022.3 LTS runs faster and smarter on more GPUs than ever before. The full story is about performance boosts across all supported CPUs and GPUs, hand in hand with automatic device discovery and load balancing, dynamic inference parallelism, and selection of compute modes added to AUTO functionality—enabling multiple accelerators (e.g., multiple Intel Data Center GPU Flex Series) to be used at once to maximize inferencing performance.

在硬件方面，简而言之，OpenVINO 2022.3 LTS 在更多 GPU 上运行得更快、更智能。这里面完整的故事是关于所有受支持的 CPU 和 GPU 的性能提升，与自动设备发现和负载平衡、动态推理并行性以及添加到 AUTO 功能中的计算模式选择携手并进，使多个加速器（例如，多个 Intel Data Center GPU Flex 系列）能够同时使用，以最大化推理性能。

And above all, we are quite happy to share that OpenVINO 2022.3 LTS officially fully supports Intel discrete GPUs!

最重要的是，我们很高兴与大家分享 OpenVINO 2022.3 LTS **正式完全支持 Intel 独立显卡**！

4. **Why is support for discrete Intel® GPUs big news?**
4. 为什么支持 Intel®独立显卡是大新闻?

This is the first time OpenVINO is providing gold-level support for running inference workloads on Intel discrete GPUs. Backed by more than five years of experience optimizing, testing, and deploying inference on Intel®

Processor Graphics (or “iGPU”), this is just the last step of a long journey that successfully brings OpenVINO to many affordable GPUs that are widely available for desktops, laptops, and servers.

这是 OpenVINO 首次为在 Intel 独立显卡上运行推理工作负载提供黄金级支持。凭借五年多在 Intel®图形处理器（或“iGPU”）上优化、测试和部署推理的经验，这只是漫长旅程中的最后一步，它成功地将 OpenVINO 带到了可广泛适用于台式机、笔记本电脑和服务器的许多价格合理的 GPU 上去运行 AI 推理。

5. **Will the OpenVINO™ 2022.3 LTS break your existing AI code?**
5. OpenVINO™ 2022.3 LTS 会破坏你现有的 AI 代码吗?

Not if that code was written or had already been ported to the new API 2.0.

如果该代码已编写或已移植到新的 API 2.0，则不会。

If you plan on upgrading to future versions of OpenVINO in 2023 to leverage new features, keep in mind that these features and optimizations will not get backported to the 2022.3 LTS release. For production deployments, we recommend staying up to date with OpenVINO 2022.3 LTS dot releases until new features in 2023 are stabilized in next year’s LTS.

如果您计划在 2023 年升级到 OpenVINO 的未来版本以利用新功能，请记住，这些功能和优化不会被移植到 2022.3 LTS 版本。对于生产部署，我们建议保持最新的 OpenVINO 2022.3 LTS 版本，直到 2023 年的新功能在明年的 LTS 中稳定下来。

6. **When should you upgrade and what is the best way to upgrade?**
   什么时候升级以及最佳的升级方式是什么？

We recommend that everybody wishing to quickly develop and deploy high-performing AI applications use OpenVINO 2022.3 LTS. But, for whatever reason, if that is not possible and you don’t want or need to take advantage of all the great features released throughout the year, the previous LTS release, OpenVINO 2021.4 LTS, will be supported with security patches until 2024.

我们建议希望快速开发和部署高性能 AI 应用程序的每个人都使用 OpenVINO 2022.3 LTS。但是，无论出于何种原因，如果这是不可能的，并且您不想或不需要利用全年发布的所有优秀的功能，则上一个 LTS 版本 OpenVINO 2021.4 LTS 将在 2024 年之前获得安全补丁的支持。

When deciding, it’s extremely important to keep in mind that LTS releases are the only ones for which we provide official bug fixes and security patches through dot releases over an extended period of time.

在决定时，非常重要的一点是要记住，LTS 版本是我们在很长一段时间内通过 dot 版本提供官方错误修复和安全补丁的唯一版本。

You can upgrade to OpenVINO 2022.3 LTS using the following command:

你可以通过以下命令升级到 OpenVINO 2022.3 LTS 版本：

```
pip install --upgrade openvino-dev
```

But make sure to check all your dependencies because the upgrade may update other packages beyond OpenVINO. If you wish to install the C/C++ API, pull a pre-built Docker image or download from another repository, visit the download page to find a package that suits your needs. If you are looking for model serving instructions, check out the new documentation.

但请确保检查所有依赖项，因为升级可能会更新 OpenVINO 以外的其他软件包。如果您希望安装 C/C++API，请提取预构建的 Docker 映像或从其他存储库下载，请访问下载页面以找到适合您需要的包。如果您正在查找模型服务说明，请查看最新文档。

Additional Resources:

OpenVINO™ Release Notes
OpenVINO™ Notebooks
Accelerate your models with Optimum Intel and OpenVINO™

Tracking Data (Do Not Edit)

Company	Intel
Solution	OpenVINO 2022.3 LTS
Audience	Developers
SEO Keywords	*OpenVINO, AI developers, AI basics, learn AI*
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