

Intel Python vs Linux Mint Python

who is the fastest of them all?

Background

- Speeding up Python, using:
 - Intel Math Kernel Library (Intel MKL) for BLAS and LAPACK
 - Intel MKL vector math library for universal functions (uMath)
 - Intel Data Analytics Acceleration Library (Intel DAAL) for machine learning and data analytics
 - Integration with Intel Advanced Vector Extensions (Intel AVX), a feature of the latest Intel Xeon processors

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The screenshot shows a web browser window titled "Intel® Distribution for Python* - Mozilla Firefox". The address bar shows the URL "https://software.seek.intel.com/python-distribution". The page features the Intel Software logo at the top. Below it, a large blue banner with the text "UNLEASH A FASTER PYTHON ON YOUR DATA" and a glowing blue snake graphic. The main content area is titled "Deliver Close-to-Native-Code Performance." and describes the Intel Distribution for Python as a ready-to-use, integrated package that delivers faster application performance on Intel® platforms. It lists three key benefits: Accelerate compute-intensive applications, Optimize performance with native Intel® Performance Libraries, and Implement and scale production-ready algorithms. A "Submit" button is highlighted with a red box.

Intel® Distribution for Python* - Mozilla Firefox

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https://software.seek.intel.com/python-distribution 67%

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The Intel distribution can be used for both personal and commercial development. It's available for Windows®, Linux®, and macOS®.

Need more details? Visit [Intel® Distribution for Python®](#).

For more complete information about compiler optimizations, see our [Intel® Compiler Optimization Guide](#).

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<https://software.seek.intel.com/python-distribution>

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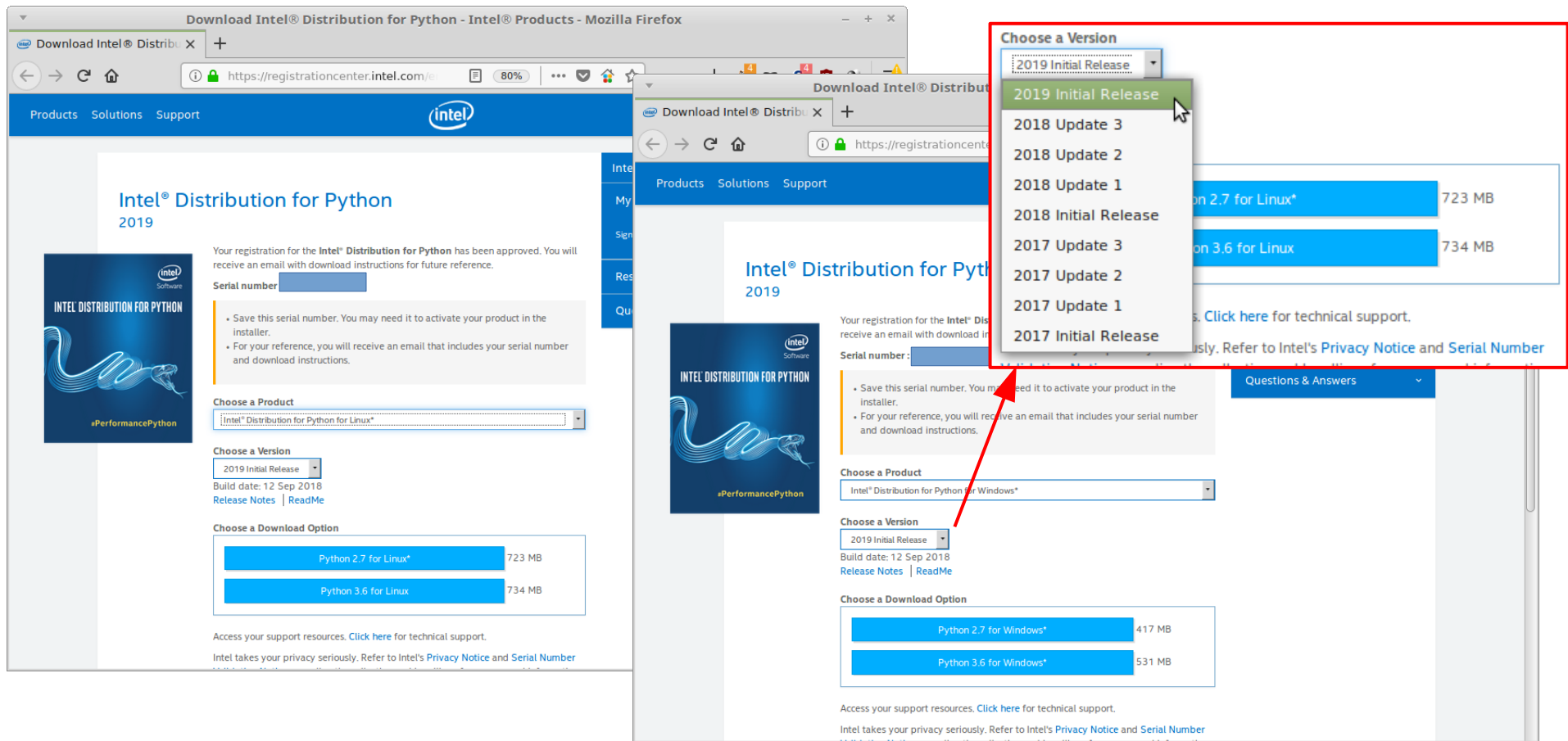
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- Available for Linux, OSX, Windows



Size: 420 - 730 MB

Testing

- Linux Mint 18.2, Python 3.5
- Intel Python 3, Python 3.6
- using timeit module
 - runs 1,000,000 times
- tests
 - list generation
 - numpy matrix operations
 - scipy linear algebra
- inspired by Intel benchmarks

<https://software.intel.com/en-us/distribution-for-python/benchmarks>

Results

Test	Linux Mint	Intel Python
list with 1,000 elements	24.335	29.399
list of 100 random numbers	8.018	9.842
exp of 100 random numbers	18.944	22.446
log10 of 100 random numbers	20.692	23.854
sqrt of 100 random numbers	15.866	20.772
random 100x100 matrix	76.9	93.980
dot prod of two rand matrices (20x20)	11.167	12.688
1000 normal dist random numbers	40.841	43.698
1000 gamma dist random numbers	68.015	69.726
array + scalar	1.492	2.251
array - scalar	1.584	2.049
array * scalar	1.552	2.182
inverse of matrix	49.827	58.822
fft and ifft	35.680	48.088
LU decomposition	8.488	10.358

Oh well...