

	Front End	IR	Backend	Benchmark	APEX	Ravel	Tools
1	<ul style="list-style-type: none"> <li>Minimal NumPy</li> <li>1 and 2 Arrays of Doubles</li> <li>C++ API</li> <li>Serialization</li> </ul>	<ul style="list-style-type: none"> <li>Approximate Algorithm with 2 tiling &amp; 0/1 cost function (In progress)</li> <li>OpenSCoP</li> </ul>	<ul style="list-style-type: none"> <li>Primitives (including IO)</li> <li>Single Node</li> <li>Minimal Interpreter</li> <li>Performance Counters</li> </ul>	<ul style="list-style-type: none"> <li>Logistic Regression</li> <li>ALS</li> <li>K-Means</li> </ul>	<ul style="list-style-type: none"> <li>Chunking (In progress)</li> <li><del>Python Bindings?</del></li> <li>Application Policy (In progress)</li> <li>Task Dependencies</li> <li>Performance Comparisons</li> </ul>		<ul style="list-style-type: none"> <li>Buildbot</li> <li>Regression Testing</li> <li>Performance Regression (In progress)</li> <li>Spartan</li> <li>CMake</li> <li>Ravel</li> <li>Visualizing</li> <li>Jupyter</li> <li>Docker</li> </ul>
2	<ul style="list-style-type: none"> <li>Data placement semantics (Annotations)</li> <li>Parallelism Annotations</li> <li>3+Dimensions (Tensors)</li> </ul>	<ul style="list-style-type: none"> <li>Approx. Algorithm with N-tiling with any cost function</li> <li>Approximation Hardness</li> <li>Optimized Primitives using polyhedral model</li> <li>Spartan Greedy Algorithm &amp; Exact Algorithm</li> <li>Auto Differentiation</li> </ul>	<ul style="list-style-type: none"> <li>Accelerators</li> <li>Tiled IO</li> <li>Distributed Parallelism</li> <li>Initial Adaptive Data Decomposition</li> </ul>	<ul style="list-style-type: none"> <li>NN</li> <li>BFS</li> <li>LDA</li> <li>Distributed LRA</li> <li>Distributed case study of LDA</li> <li>Approximate cost function coefficients</li> </ul>	<ul style="list-style-type: none"> <li>Parcel Coalescing</li> <li>Algorithm Policies</li> <li>Task Inlining</li> <li>Critical Path Analysis</li> <li>Integration of Phylanx Counters</li> </ul>	<ul style="list-style-type: none"> <li>Jupyter Integration</li> <li>Tree Scalability</li> <li>Trace</li> <li>Feature parity (with ATV)</li> <li>Distributed view of task</li> </ul>	
3	<ul style="list-style-type: none"> <li>3+ Dimensions</li> <li>Complex Numbers (Moved from year 2)</li> </ul>	<ul style="list-style-type: none"> <li>FPT</li> <li>Bi-Level Tiling</li> <li>Miscellaneous Optimizations</li> <li>Using Machine learning</li> </ul>	<ul style="list-style-type: none"> <li>Additional Operations</li> <li>Task Cancellation</li> </ul>	<ul style="list-style-type: none"> <li>Cholesky</li> <li>SVD</li> <li>CG</li> </ul>	<ul style="list-style-type: none"> <li>Multi Objective Optimizations</li> </ul>	<ul style="list-style-type: none"> <li>Data view</li> </ul>	

**Completed**  
 Unscheduled Tasks  
**Prioritized**  
 Task added this meeting