Two Factor Analysis: 72 Experiments (3 traces x 4 pipeline widths x 6 replications)

Factor A: Pipeline Width, **Factor B:** Workload Trace File

Overall Mean Runtime:

	Average Execution Time in Cycles						
Trace	**Width = 1**	**Width = 2**	**Width = 3**	**Width = 4**	**Row Sum**	**Row Mean**	**Row Effect**
srv_0	1,470,353	1,214,374	1,192,794.333	1,192,125.333	5,069,647	1,267,411.668	114,276.459
Compute_int_0	1,208,456.5	1,034,033.167	987,880.8333	987,880.5	4,218,251	1,054,562.75	-98,572.459
Compute_fp_1	1,364,947.833	1,061,592.333	1,061,592.333	1,061,592.333	4,549,724.83	1,137,431.208	-15,704.001
Column Sum	4,043,757	3,310,000	3,242,267.5	3,241,598.17	13,837,623		
Column Mean	1,347,919	1,103,333.333	1,080,755.833	1,080,532.723		1,153,135.209	
Column Effect	194,783.791	-49,801.876	-72,379.376	-72,602.486			

Replication 1: starting instruction 1

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1476018	1221641	1200180	1199564
Compute_int_0	1205684	1031800	985105	985105
Compute_fp_1	1666380	1317870	1317870	1317870

Replication 2: starting instruction 5,000,000

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1457169	1197132	1175338	1174574
Compute_int_0	1222307	1045191	1001759	1001757
Compute_fp_1	1665526	1316936	1316936	1316936

Replication 3: starting instruction 10,000,000

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1467838	1211249	1189554	1188867
Compute_int_0	1205686	1031802	985107	985107
Compute_fp_1	1660200	1311127	1311127	1311127

Replication 4: starting instruction 15,000,000

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1463482	1204110	1182376	1181631
Compute_int_0	1205687	1031805	985109	985109
Compute_fp_1	1066209	808241	808241	808241

Replication 5:starting instruction 20,000,000

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1479486	1227362	1206055	1205469
Compute_int_0	1205686	1031801	985106	985106
Compute_fp_1	1065797	807807	807807	807807

Replication 6:starting instruction 25,000,000

Trace Files	Width 1	Width 2	Width 3	Width 4
srv_0	1478125	1224750	1203263	1202647
Compute_int_0	1205689	1031800	985099	985099
Compute_fp_1	1065575	807573	807573	807573

Contributions Of Each Group Member To The Project

Jason Soo: Structural Hazards, Debugged Errors, True Data Dependencies, AVL tree, Pipeline implementation.
Zoe Wong: Data Hazards, Control Hazards, Two factor Analysis, some logic of solution such as Bubbling.