DISTRIBUTED FRAMEWORK AND LIBRARY WITH C# .NET

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OVERVIEW

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- Motivation
- Examples
- Proposed Work
- Evaluation
- Related Work
- Milestones

SUMMARY

Create a distributed framework for completing tasks, with a library built to utilize said framework, written in C# .NET.

MOTIVATION

- CSCI – 251 Concepts of Parallel and Distributed Systems
- Importance of teaching Distributed Systems

EXAMPLES

Should be able to use the framework to solve problems such as:

- Prime Factorization
- “Big Data”
- Graphs: Hamiltonian cycles

PROPOSED WORK

- Final deliverable: a framework for distributing work out to nodes and a basic library for developing code to take advantage of the framework.
  - Using Task Parallel Library (TPL)
  - Map Reduce
  - Visualizations

EVALUATION

- Ease of use over performance
- Visualizations

RELATED WORK

- Parallel Task Library
- Parallel Java 2

MILESTONES

Project Schedule

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CSCI.788.05 - Computer Science MS Project

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Week	Notes
Week 1: 1/23 - 1/29	Project Topic and Faculty Adviser
Week 2: 1/30 - 2/5	Project Description
Week 3: 2/6 - 2/12	
Week 4: 2/13 - 2/19	Milestone 1: Distributed environment/library with minimal functionality such that a user can create a simple job to be completed by multiple nodes in a network.
Week 5: 2/20 - 2/26	
Week 6: 2/27 - 3/5	Report Outline
Week 7: 3/6 - 3/12	Report Section (draft)
Week 8: 3/13 - 3/19	
Week 9: 3/20 - 3/26	Milestone 2: More completed framework from part one and attempt at Parallel Map Reduce
Week 10: 3/27 - 4/2	
Week 11: 4/3 - 4/9	
Week 12: 4/10 - 4/16	Poster Outline
Week 13: 4/17 - 4/23	Milestone 3: Polished Library with visualizations.
Week 14: 4/24 - 4/30	
Week 15: 5/1 - 5/7	Poster draft
Week 16: 5/8 - 5/14	Poster final