## Syllabus

## CS 42000-004 Senior Design

#### Spring 2020

# **Instructor**: Dr. Ruijian Zhang

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Office: CLO 372

Office hours: Tuesday 3:30 – 5:00 pm;

Thursday 3:30 – 5:00 pm;

Friday 11:40 am – 12:40 pm;

5:30 – 7:30 pm

**Prerequisites:** CS 123 or 124, CS275, CS442

**Class Time:** Hours Arranged**;**

Weekly team meeting on Friday 3:30 – 5:30 pm

**Text:** No textbook is required for this course,

### Course Description:

This course is a computer science senior design applying Machine learning and Data-Mining technologies.

The objective is to develop an Intelligent Inflation Prediction System. This study tries to examine the gap between the rich and the poor. Taking a lead from the study conducted at the University of Michigan, through this study we try to develop a model that can predict inequality gaps in the future and possibly influence the predicting of inflation rates.

**Outcomes and Goals of the Course Project:**

The course project utilizes data mining technologies, to develop a data model that analyzes substantial amount of data which contain information on the income, expenses and the financial footprints of families in the United States. The goal is to build an intelligent system that can predict inflation rates, also predict the ever widening gap between the rich and the poor and find the major elements that govern this widening behavior. The system will explore the consideration of narrowing the gap between the rich and the poor and provide some possible suggestion of solutions.

**Grading:**

The grade will be determined as follows:

* Deliverables (Source Code, Object Code, Preprocessed Data Sets, Configuration Items and Integrated Data Mining Prediction System) 40%
* Documentation and Reports (Documents of the System, Project Narrative,Results analysis, Minimum two Job Reports of What and How to do your work) 30%
* Participation (Attendance of the Team Meeting, Presentation of your jobs, Team Discuss, and Quizzes) 30%

**Attendance Policy:**

Attendance of team meetings is required. An absence of a team meeting without instructor’s approval prior to the team meeting will lead the student losing three percent of the total grade of the course. Excessive absence will lead the student to be withdrawn from the course by the Dean of Students Office with a grade of W. Excessive absence is defined as following:

* Have been absent for three consecutive team meetings without instructor’s approval prior to the team meetings; or
* Have been absent cumulative five team meetings without instructor’s approval prior to the team meetings.

**ADA Statement**:

If you are a student with a documented disability who will require academic/classroom accommodations in this course, please register with the Coordinator of Services for Students with Disabilities in the Student Support Services Office located in the Student Union and Library Building (SUL), Room 341, phone numbers: 219-989-2455, 219-989-2454(voice/TTY) or 219-989-2920.

**Statements of the Honor Code:**

The following is an Honor Code and an Honor Pledge to which all Purdue University Calumet Students must adhere: “I understand that academic dishonesty will not be tolerated at Purdue University Calumet.  I am here to learn.  Through learning, I will strive to become a better person and a more valuable contributor to society.  I understand that dishonesty in the classroom, through cheating, plagiarism or other dishonest acts defeats this purpose and disgraces the mission and quality of a Purdue University Calumet education.  Therefore, I make the following pledge:  ‘In accordance with the honor code, I will not engage in dishonesty in my academic activities, and I will not tolerate such dishonesty by other students.’”