Militsa Sotirova

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Skills

Java, C (with MPI), Python, basics of HTML and CSS, Android Studio

Experience

Research: Ruminant Farm Systems (Farm Simulation Model)
November 2018 - PRESENT, Cornell University

Creating a simulation using Python to model the flow of nutrients and resources throughout a farm environment, using optimization strategies to minimize costs and maximize efficiency. Working with people within Cornell as well as nationwide; focusing heavily on creating a product so that final product can be easily modified, updated, and maintained as more data are collected or the needs of farmers change.

Research: Improving Reading Level Evaluations Using Sentence Structure and Word Frequency
TJHSST Computer Systems Research Lab 2018

Created a formula to analyze reading level/difficulty which relies on the number of clauses in a sentence, indicating the sentence complexity, as well as the vocabulary difficulty based on the frequency of the words in modern English. Built a website so a user can input his/her own text and see statistics; backend was coded using Python, frontend using HTML and CSS, and CherryPy was used to link the frontend to the backend.

The Swim Club / Swim Coach
February 2017 - May 2018, Sterling, VA

The Cascades Rapids / Swim Coach
Summers 2015 - 2018, Sterling, VA

Education

Cornell University / Pursuing Computer Science Major and Business Minor
August 2018 - May 2022, Ithaca, NY

Relevant Coursework:

- Object-Oriented Design and Data Structures – Honors (CS 2112)
- Discrete Structures (CS 2800)
- Linear Algebra for Engineers (MATH 2940)
- Financial Accounting (AEM 2210)

Thomas Jefferson High School for Science and Technology
August 2014 - June 2018, Alexandria, VA

Coursework:

- Computer Systems Research Lab
- Parallel Computing
- Artificial Intelligence
- Computer Vision
- Mobile Application Development
- Cryptography