MARTHA CRYAN

mcryan@andrew.cmu.edu
(609) 577-2977

EDUCATION

Carnegie Mellon University
Pittsburgh, PA
Bachelor of Science in Computer Science
May 2020

SKILLS

Java • Python • C
Matlab • XML • SML
HTML • LaTeX • MySql
Shell Scripts • Git

COURSEWORK

_Great Theoretical Ideas in Computer Science
_Mathematical Foundations of Computer Science
_Principles of Imperative Computation
_Principles of Functional Programming
_Matrices and Linear Transformations
_Probability and Random Processes
_Parallel and Sequential Data Structures and Algorithms

LINKS

GitHub: //marthacryan
Linkedin: //marthacryan

EXPERIENCE

IT Intern - *Summer 2015, Summer 2016, Princeton NJ*
InStore Audio Network
Worked with InStore Audio Network's Java Programmer to understand and start to improve the company's body of Java code that plays music from their database.

Research Programmer - *June 2017 - Present, Pittsburgh PA*
CellOrganizer - Carnegie Mellon Computational Biology Department
Completed programming tasks from creating and testing tools to debugging and maintaining existing tools for CellOrganizer. CellOrganizer is a software created in the Computational Biology Department of Carnegie Mellon which uses machine learning to train models of cells when given processed images. Programming languages used include Matlab, XML, Shell scripts, and Python.

PROJECTS

N-Body Simulation
Created a simulator in Java that took input and used physics calculations on that input to simulate motion in a given universe.

Seam Carving
Replicated a software in Java that allowed users to resize an image without warping it by repeatedly resizing the image one pixel of height or width at a time. This implementation used graph theory as a basis for creating the most efficient algorithm possible.

ACTIVITIES

Women@SCS, *Carnegie Mellon University*
Fall 2016-Present
_Participate in outreach for local schools about Computer Science
_Big Sister in Big Sister/Little Sister mentoring program

Chief Engineer, *WRCT Pittsburgh*
May 2017-Present
An annually elected position which ultimately has the goal of keeping the radio station WRCT operational. Position responsibilities include attendence of weekly executive board meetings, equipment repair and upkeep, and control of website operations.