Rasmi Lamichhane | Résumé

rala8730@colorado.edu • https://github.com/rala8730

Education

The University of Colorado, Boulder **2012-Current**
Bachelor of Computer Science

Experience

University of Colorado Boulder Libraries **Summer 2015-Fall 2016**
Student Assistant Digital Lab & Library IT

- Worked on digitizing archival material and IT Supported web help desk, troubleshooting software and hardware problems.

Computer Skills

Language: C/C++, Python, Java, HTML/CSS, Mathematica, SQL, Bash Shell Scripting, Regex, Scala, Android
Tools: Rest and Soap, Waterfall, Databases, Puppet, Github, Adobe Photoshop, Adobe Bridge, and Abbyy Scan Station
Software Methodology: Pair Programming, Agile/Scrum methodology

Projects

Sparki Pill Pusher **Summer 2016**
Introduction to Robotics *Source - https://git.io/v64Lp | Demo - https://youtu.be/TKgePysJxr0*

- Programmed **Sparki**, a programmable **Arduino** robot, to follow specified paths to fetch RFID tagged bottles using an **RFID** scanner.
- Robot uses light sensors to ensure that it stays on track, and ultrasonic sensors to find the fastest path to the bottle.
- If an incorrect bottle is approached, Sparki will display an error message, and move back to the start to await further instructions.

Python Data Visualization **Summer 2016**
Software Development Methods and Tools *Source - https://git.io/v68ax | Demo - https://youtu.be/K5FWMMMd8d4*

- Created a web page using **HTML**, **Python**, and **mySQL** that visualizes Carbon Emission from various states over past two decades.
- The states are color-coded according to the annual amount of emissions per state in million metric tons of carbon dioxide, and a cursor hover over a particular state will display a breakdown of that state's Carbon emissions per type in petroleum, coal, and gas.

Android Inventory App **Fall 2016**
Learning Android *Source - https://git.io/viOZW*

- Implemented a inventory app using **Android Studio** with **Java** and **XML**. Displays image, price and quantity of the each item and calculates the overall amount of total items. Used various textviews, image views, buttons, and layouts.
- User can add each item by pressing the plus button and remove the item by pressing - button. Textview shows the count of the items and price for each in the screen and finally submit shows the overall of cost of the transaction.

Rootfinding **Fall 2016**
Numerical Computation *Source - https://git.io/viNQe*

- Implemented Root-finding in **Python** to implement **Newton's** method, with line search and quadratic approximation using python dictionary and tuple. Gives user a sense of difference between which function is diverging and conversing faster.

Battleship **Summer 2015**
Data Structures *Source - https://git.io/viNQI*

- Implemented the battleship board game. The computer will hold the ships in the grid and the player will have to guess where those ships are. Used C++ classes, loops and different methods. User can choose the size of the board location of the ship.

Stacks and queues **Summer 2015**
Data Structures *https://git.io/viNQA*

- Implemented stacks and queues with array, single linked list and double linked list. Used **C++** arrays, single and double linked lists, loops, pointers, classes and member functions.