Harsh Patel

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Skills

Comfortable C Java Python R SQL Git Bash Scripting Android
Familiar C++ LaTeX Cloud Computing Concurrent Programming

Education

Bachelors in Computer Science, University of Central Florida, Orlando, FL - 32816 Graduation: August 2017

- In-Major GPA : 3.7
- President's Honor Roll - Spring 2016

Work Experience

Teaching Assistant, Database Management Systems, University of Central Florida Spring 2017

- Proctored and graded student exams and assignments
- Met with 40 student groups individually to review and grade their course project implementations
- Answered student questions about the course content **(SQL)** and grading policies

Part-Time Employee, Star Liquor, Cocoa, FL - 32927 2014 - Present

- Process customer sales transactions and respond to customer questions and concerns

Projects

Metagenomic Taxonomic Inference, Source : https://github.com/harshpatel1995/mti

- Designed a software package for **Ubuntu 16.04** to infer and visualize relative abundances of microbial genomes present in a metagenomic sample using **Docopt** for a **command-line interface**
- Implemented GRAMMy (http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0027992) in **C++** from scratch to **statistically infer** the genome relative abundance of a sample using mixture models
- Created a visualization module for users to analyze relative abudances of their samples in **Python** using **Pandas**, **ETE Toolkit** and **Seaborn**
- Built a **BWA** search index reference of all prokaryotic and viral genomes from **NCBI's RefSeq** database using **Bash Scripting** in UNIX

Concurrent BST and AVL Trees, Source : https://github.com/harshpatel1995/ConcurrentTrees

- **C++** implementation of concurrent logically-ordered BST and AVL tree algorithms

My Fitness Buddy, Source: https://github.com/harshpatel1995/MyFitnessBuddy.git

- Created an **Android** application for users to create, log and track workouts
- Implemented application functionality using **Java** and layouts using **XML** with a focus on providing a clean **user interface**
- Designed a **SQLite** database to store, retrieve and filter user data using a customized search filter

Volunteer Service

Notetaking Volunteer, Student Accessibility Services, University of Central Florida Spring 2017

- Created and uploaded class notes and exam reviews for two disabled students