

# HARSH PATEL

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## SKILLS

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

## EDUCATION

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**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

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**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 **XML**) 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

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**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 abundances of their samples in **Python** using **Pandas DataFrames**, **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

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

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