Siddharth **Patel**

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siddharthpatel

EDUCATION

West Lafayette, IN	Purdue University	Jan 2016 – May 2018

- Bachelor of Science in Computer Science. GPA: 3.80

Camden, NJ	Rutgers University	Jan 2014 – Dec 2015

- Bachelor of Science in Computer Science. GPA: 3.68

WORK EXPERIENCE

Teaching Assistant	Purdue University	Jan 2017 – May 2017

- Lab mentor and grader for course: CS 251 - Algorithms and Data Structures

Software Verification Engineer	Delphi	Aug 2016 – Nov 2016

- **Developed plugins** with a toolset that monitored and sent CAN serial messages through USB ports
- Verified message requirements from the Product Definition Specification

Peer Tutor	Rutgers University	Jan 2015 – Aug 2015

- **Tutored** Introductory **Python Programming and Discrete Math** courses to the college undergraduates
- Tutored Physics and all Math courses up to Calculus 2 to the college undergraduates

Orientation Leader	Rutgers University	May 2015 – Dec 2015

- Worked with team of 20 Orientation Leaders to organize and manage the orientations for the new incoming students at Rutgers University - Camden

INDEPENDENT PROJECTS

1) Simplified Linux Shell | **C, C++, LEX, YACC**
   - Implemented scanner and parser for the shell with **LEX** and **YACC.**
   - Implemented a simplified Linux shell from scratch which provides similar functionality as Bash, such as, **IO redirection, execution of simple commands, file redirection** and other features that make the shell more useful.

2) Web Server | **C, C++**
   - Developed a web server application which users can use to host their website on any computer using different concurrency modes..
   - Learnt about **HTTP requests**, **socket programming** and **concurrency modes**.

3) CleanUp | **Bash Scripting**
   - Developed an application that sweeps directories for old files and prompts for their deletion.
   - I realized that my hard drive was cluttered with old files that I have forgotten to delete. This personal project is a useful way to clean up the clutter every once in a while.

4) Seam Carving | **Java**
   - Developed an application for resizing images. Unlike other applications, the algorithm used preserves features like aspect ratio, etc.
   - Used **topological sort** algorithm to find the vertical/horizontal seam of less energy (less important) pixels and remove them.

5) Chorus | **Python, Flask**
   - **Worked** with **team of 5** people to develop a web application that automatically suggest songs based on the taste of songs of guests and allows guests to vote on what they want to hear next.
   - **Implemented multi-threaded server** for the application and made it integrate with database, UI and **Spotify APIs** using **Flask**.

6) Burrows-Wheeler | **Java**
   - Developed an application using Burrows-Wheeler data compression algorithm which transforms a piece of text in which sequences of same characters occur near each other many times thus, making it easier to compress. The implementation **out compresses PKZIP and gzip** by a factor of 3.

Languages and Technologies

- Java, C, Python, x86 Assembly, ARM, Git, Flask, Shell