Dhanvi Patel

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EDUCATION:

North Park Secondary School   2016-2020
- Honor Roll with distinction
- IBT program

University of Toronto   September 2020 – intended 2024
- Candidate for Honours Bachelor of Science in Mathematics, Computer Science and Statistics
- Relevant Courses: Software Design, Theory of Computation, Software Tools and Systems Programming, Databases and Web Applications, Data Structures and Algorithms, Statistical Analysis, Database Management, Linear Algebra, GitHub + Agile

SKILLS

Languages: C#, Java, Python, C++, HTML, JavaScript, CSS, R, C, Assembly, LaTeX
Frameworks: Wing 101 IDE, PyCharm CE, VS code, Eclipse, Arduino, RStudio, Ripes, Overleaf
Practices: Agile, SQL, GIT, OOP, Ubuntu, Terminal
Web Tools: Web-flow, Wix, Figma, Canva, Photoshop

PERSONAL DEVELOPMENT AND PROJECTS:

Unity Game Development | *Unity, C#*
- Developed a game called 2d Platformer on Unity using C#
- Had different C# scripts for each player in each scene.
- Used assets in unity to construct scene.
- This game was also made using C++

Python game of "MEEPO" | *Pycharm, Python*
- Used PyCharm CE as the IDE
- Used python classes to make "Meepo" move in all directions, adhere to all the rules, and set all the objects
- This project was inspired from the game "Baba is you"

Python QuadTree | *Pycharm, Python, Trees, Classes*
- Done at the University of Toronto as an assignment for the course CSC148
- Used PyCharm CE and Wing 101 as the IDE
- Used QuadTree to compress images at any given resolution.
- Recursion was used to through quadrants of any given image and compressing them by how much data was stored.
- Tested code using unit testing to ensure it runs bug-free.

Java Game Development | *Java, Eclipse, UML*
- Developed a game of Three Musketeers using Java
- Used Eclipse as the IDE and designed basic java classes
- Used the Single Responsibility Principle to ensure each class is small and performs a singular task
- Used UML design patterns such as Proxy and Composite pattern
- Used inheritance, composition, and polymorphism concepts

- Built upon the game developed with a team using Agile methodology

Mysh - Customized Shell | *C, Linux, Valgrind, Terminal, Make*
- Developed a customized Linux Shell using C, allowing users to operate it on terminal and replicate the original built-in shell functions
- Developed to execute several commands by adhering to forking, piping, signals, and backgrounding in C.
- Cohered to networking sockets, allowing servers to be non-blocking
- Used VS code as the IDE

EXPERIENCE:

Teaching Assistant   July 2020 – Present
- Running an at home tutoring service and teaching students of all grades until second year university students
- 1-hour classes for 2 days per week for Math, English, Coding and Science and French
- 95% of students taught have shown improvement in their grades. During class, a real teaching environment is stimulated with tests and problems that boost their critical thinking skills.
- Used different styles of teaching and gave problems that went from easy to hard to ensure the student understands.
- Planned programs based upon the current curriculum.

Hack the North at University of Waterloo   September 2019 – September 2019
- Attended an in-person Hackathon at the University of Waterloo
- In a group of 4 people we developed an app that efficiently sorted out waste into recycling, garbage, and compost.
- My role in this project was to code using python how to separate the waste. I used OpenCV to get the camera. Using Microsoft Azure to store sample pictures and to test it out. Using those objects that are stored we re-took pictures and by comparing them to the ones stored the program outputted, 'Garbage', 'Compost', or 'Recycling'
- Won an award given by RBC for the best project ideas

Tech2U – Technical Classroom Ambassador   May 2022 – August 2022
- Helped professors if they faced any difficulty using classroom technology such as speakers, zoom or any connection issues.