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, React
Frameworks: Wing 101 IDE, PyCharm CE, VS code, Eclipse, Arduino, RStudio, Ripes, Overleaf
Practices: Agile, SQL, GIT, OOP, Ubuntu, Terminal, Software Development Life Cycle (SDLC)
Web Tools: Web-flow, Wix, Figma, Canva, Photoshop, Jira, Confluence

EXPERIENCE:

Python Developer Intern, Boeing Jeppesen Canada September 2023 – December 2023

- Used OOP principles in python to design algorithms that efficiently managed crew planning for airlines.
- Implement a test-driven development approach to guarantee high quality by creating automated test cases concurrently with your coding process.
- Managed code using Git on Linux.
- Worked using the Agile development process through Jira and Confluence while working with product managers and software engineers to ensure the performance of the crew management process.

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.

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*
- PyCharm CE was the IDE this game was developed on.
- Concept of python classes was implemented 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.
- Coded using the PyCharm CE and Wing 101 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.
- Basic Java classes were designed on Eclipse.
- Single Responsibility Principle was used to ensure each class is small and performs a singular task.
- UML design patterns such as Proxy and Composite pattern were implemented.
- OOP concepts such as inheritance, composition, and polymorphism were integrated.
- 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.