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Ashish Ramnath

SKILLS

C++,GUI Development,High Level Problem Solving with C++,HTML,CSS,Javascript, Python,Web Framework-Django,Web Dev and Design,SQL,RDBMS with SQL,Systems Analysis and Systems Design,High Level Mathematical Skills,Analytical Skills,Problem Solving skills, Data Structures and Algorithm Design, Object Oriented Analysis and Program Design, Experience with Computer Networking, Experience with Pandas, Numpy, Matplotlib, Seaborn.

Project Experience

C++, GUI Development, Qt6 — *Product Management System*

- This System implements Single Responsibility Principle (SRP) and Separation of Concerns (SoC).
- The System is built using C++,QTCreator(GUI),CSS, and OOP Principles and can therefore be adapted to Manage Various Objects.
- The System is a GUI and therefore provides a user-friendly interface to interact with the system.
- C++ is my forte, honed over years.

C++, GUI Development,Qt6 — *Album Management System using MVD*

- This System leverages the Model-View-Delegate pattern in Qt.
- The implementation of this pattern allows for more modularity and control of various aspects of the system.
- The System is built using C++,QTCreator(GUI),CSS, and OOP Principles and can therefore be adapted to Manage Various Objects.
- The System is a GUI and therefore provides a user-friendly interface to interact with the system.

Python,Pandas,Numpy,Matplotlib,Seaborn,Data Science — *War Fatalities Analysis*

- This project leverages a variety of techniques to process, clean, and draw inferences from data spanning 23 years, pertaining to the numerous conflicts between Israel and Palestine. The data contained 177984 unique data points.
- The tools utilized to accomplish this project include Python, Jovian, Jupyter, Pandas, NumPy, Matplotlib, and Seaborn.
- Several visualizations were used to present the outcomes, making it easier to draw inferences.

- The outcome of this project serves as a foundation for forming an unbiased, data-driven analysis, and data-backed information.

Python,Pandas,Numpy,Jovian,Matplotlib,Seaborn,Data Science – *South Africa Crime Analysis*

- This project leverages a variety of techniques to process, clean, and draw inferences from data spanning 12 Financial years, pertaining to the crime in South Africa. The data contained 18672 unique data points.
- The tools utilized to accomplish this project include Python, Jovian, Jupyter, Pandas, NumPy, Matplotlib, and Seaborn.
- This project utilized a large number of plots to provide clear visualizations to further extract meaningful information.
- The outcome of this project serves as a foundation for forming an unbiased, data-driven analysis, and data-backed information.

Python,Turtle, Game Development – *Nokia Snake Game Simulator*

- Snake was a hugely successful popular game that appeared during the rise of the Nokia Phone decades ago.
- I have used Python and a GUI development library Turtle to simulate the game, including all functionality.
- OOP was used to separate key modules to reduce dependency and increase modularity.
- The player interacts/plays by using the keyboard as signal/slots ensure actions taken by the user reflect in the game thus allowing for a deeper sense of immersion.

SQL,PopSQL,Raw Data – *Creating and Managing a Database for a TV Show Paper Company*

- This system leverages SQL as a means to Create Tables that handle represent various areas of a company
- The Database I created and managed consisted of the following tables: branch,branch_supplier,client,customer,employee,invoice,line,product, student,vendor,works_with
- The Database was created such that it can easily be used to create visualizations.
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Youtube, Canva, Python, AI – *Social Media (YT channel Manager)*

- Taking the role of thumbnail design,content creation and channel management.
- Tools used, Canva for content creation, python for automation and AI for reducing redundancy.
- The content that I influenced the most, garnered over 100k views.

C++,Data Structures & Algorithms, Simulation – *Application of Data Structures: Simulation*

- This system is one of many I have built to simulate the behavior of real systems.

- The system allows the user to experiment with the simulation without the large costs and dangers of working with the real system.
- The simulated system can easily be adapted to a time-driven simulation.
- The outcome of this system serves as a means to test an expensive system using simulation techniques.

Python,CSV,MS Office,Google Sheets,Data, Data Validation and Entry — *Data Utility library*

- This system leverages Python and its many utilities to validate data from a source(s), make corrections if needed, and write the data to some final Location.
- The outcome of this system allows the user to, with minimal adjustment, read data from a source(s), validate it, correct it, and write it to a new source.

C++,C++ available Libraries — *Flight Simulation system*

- This system leverages OOP principles to model a flight system that allows a user to book a flight, while accounting for various IRL details.
- The system handles validation at required steps.
- An individual user can check flights booked under his/her name and at given times.
- The system accounts for loose coupling, allowing new additions to have minimal/no effect on existing functionality.
- New methods/members can be easily added.
- The system allows the user to write flight details to an external location for storage purposes.

Python,Flask,HTML,CSS,Javascript,API, Real time — *Stock Trading website*

- This is my Final Project for the Harvard CS50 Course.
- The system allows users to create, and manage a stock purchasing account with Real Time stocks and Dummy Money.
- You can view your stock investments in real time.

Github,HTML,CSS,Bootstrap,Javascript, Personal website— *Personal portfolio website*

- This is the minimal tech stack I used to build my website in one day.
- I made the admin decision to host the website on github to avoid unnecessary overhead.
- The site is 100% responsive and works on all screen sizes.
- Ashish Ramnath - Software Developer (the powerful programmer.github.io)

Python,Python available Libraries — *Numerical Methods System Approximation*

- This system leverages OOP principles in Python to build a module that packages several methods that aid in generating approximations to Numerical Analysis problems.
- The system adheres to docstring requirements, and thus provides users a means to understand the class.
- The outcome of the system allows a user to generate approximations to Numerical Analysis problems.

EDUCATION

University of South Africa, Degree— *Bachelor of Computer Science*

Apart from my background in Computer Science, I also have a Background in BCom.

Distinctions

COS1511,COS1521,INF1505,INF1520,MAT1512,COS2626,STA1610,COS2601,COS2611,COS2614,
COS2621,COS2626,ICT2621.