ALWAHAB MOHAMMAD

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EDUCATION

Bachelor of Science: Computer Science **3.76 GPA**
Minor in Mathematical Sciences and a Minor in Physics Dean's List Fall 2018 - Spring 2022
Florida International University *Graduated Spring 2022*

Related Coursework:

Data Structures
Algorithm Techniques
Data Mining
Software Engineering 1&2
Operating Systems Principles
Database Management

Extracurricular Activities:

Member of Sigma Alpha Pi
Member of Upsilon Pi Epsilon
Attended ShellHacks 2019 Fall

TECHNICAL SKILLS & LANGUAGES

Languages: Java (2 yrs), C (1 yr), C++ (2 yrs), SQL (1 yr), Python (2 yrs), R (1 yr), html/javascript/css (1 yr)
Platform: Visual Studio/Code, NetBeans, Spyder, Eclipse, PyCharm, RStudio, Google Collaboration, Docker
Software Engineering Skills: Agile scrum work environment, Scrum Ceremonies, Sprints, Documentation etc.
Algorithm Techniques: Binary Search Trees, Breadth/Depth First Search, Dijkstras, A*, Dynamic Programming…
Data Mining, Machine Learning, AI, Supervised learning, Statistical regression, Streamlit, Git, frontend, backend

PROGRAMMING PROJECTS

React Portfolio Website (HTML/CSS/JS React in Visual Code) ***amoha115.github.io***
- Built a react project from scratch utilizing useState Hook, React Icons, CSS3, HTML5, JSX, and JavaScript
- Implemented a modern & responsive design, functional on multiple device sizes with CSS3

Ransomware Detection (Python in Visual Code) ***collaborative with a team of 10 people***
- Detected system anomalies with a 75% success rate by training a model with ML Supervised Learning methods and K-means clustering to a Sysmon Simulator after weeks of debugging and testing code
- Analyzed training data results with graphs using Streamlit and packages such as streamlit, plotly, and pandas
- Continuous Communication, advancing critical thinking, strategic planning for efficient long-term solutions

Quadcopter Robotics Navigation (Python in PyCharm)
- Planned a quick, optimal path tree in a known map with obstacles using a two-sided A* algorithm and nodes
- Developed a simulation of a drone in 3d space following a trajectory created by path planning using 2D arrays, header files, 3D kinematic derivations to implement with embedded systems

Statistical Regression Modeling (R in RStudio)
- Modeled a linear regression of sample car data using k-fold cross validation on trained data
- Determined effective variables that affected price by removing non-significant regressors using p-value

Snake Game (C++ in Visual Studio 2019)
- Made a 3D snake game using object-oriented programming with OpenGL, Polygons, and Curve Rasterization
- Implemented change in 3D view and made Geometric Transformations by coding case scenario of key inputs

NACHOS OS (Java in a VM with Ubuntu)
- Modified the OS in a Virtual Machine by Implementing thread management and multiprogramming
- Employed scheduling for virtual memory with swapping and file system commands

Database on an Airport Company (MySQL on phpMyAdmin)
- Created a relational database from an Entity-Relationship diagram using relational algebra and calculus

WORK & LEADERSHIP EXPERIENCE

Florida International University Learning Assistant *Fall 2020 – Spring 2022*

Gave growth to over 80 students, leading groups of up to 8-30 students to rapidly improve problem solving skills
Improved teaching FIU Physics by communicating with coworkers in meetings to plan and learn/review

HandsOn Broward *Fall 2015 – Spring 2018*

Held leadership roles at HandsOn Broward, an environmental volunteer organization.