# Malifu Zemech

## Education

## George Mason University

Bachelor of Science in Computer Science

Sep. 2019 - May 2023

Fairfax, VA

#### Technical Skills

Front-end and back-end web development: Android Studio, React, react-admin, Spring MVC, Spring boot, Hibernate, Netbeans, MariaDB, MySQL, Oracle SQL

DevOps and Version Control: Git, GitHub, Jenkins, Docker, Apache Tomcat, Ubuntu VirtualBox

Languages: Python, Java, C, JavaScript, MySQL

Data Mining and ML libraries: NumPy, Pandas, Sci-kit learn, matplot

# Relevant Coursework

• Data Structures

• Algorithms Analysis

• Data Mining

• Systems Programming

• Software Methodology

• Numerical Analysis

• Database concepts

• Operating System

## Experience

#### CIBT Inc.

May 2022 - Aug 2022(full-time) - Dec 2022(part-time)

Software Engineer Intern

McLean, VA

• Developed and maintained a client portal for processing passport, visa, and travel services used by our customers

- Developed and maintained a client portal for processing passport, visa, and travel services used by our customers globally.
- Implemented a modernized UI alongside the design team by holding cross-collaboration meetings, and utilized tools such as HTML/CSS through React.js for the client portal that allowed our clients to see their Visa application progress, which improved user engagement metrics by 5%.
- Optimized legacy code that used SOAP with a RESTfulAPI web service using Java Spring frameworks such as Hibernate and Spring MVC in conjunction with a React.js front-end, which reduced load time metrics by 40%.
- Aided other interns through code review, pair programming, and analysis meetings to ensure process improvements in the team and development pipeline, which resulted in less project delays.
- Utilized Git and JIRA for development, version control, tracking problems, receiving feedback, and optimizing functionality in an agile environment.

## George Mason University

Sep 2020 - Jan 2021

Research Assistant

Fairfax, VA

- Research various solutions to assist members of the community psychologically affected by social isolation during COVID-19.
- Utilized a python cross-platform library (PsychoPy) to develop analytics on behavioral sciences of survey research volunteers/subjects.
- Led coordinated efforts amongst fellow researchers for discussions, meetings, and presentations.
- Delivered written reports summarizing research results automatically through Excel(xlsx).

#### Projects

Loyalty First Customer Program | Android Studio, Java, Netbeans, Oracle SQL, Apache Tomcat, Postman, GitFall 2022

- Led a team of 4 to design and developed a membership program for a Musical Instrument Franchise.
- Utilized RDBMS and developed a concise ER diagram for our infrastructure.
- Leveraged Android studios compatibility with our Java back-end system to develop the UI for our Android app.Designed the DDL process of our database by using Oracle SQL developer software.
- Took advantage of libraries such as ojdbc and servlet API to create a database connection and servlet web applications. Utilized apache tomcat servers to help provide an HTTP web server environment.

#### Heart Disease Predictor | Python: Pandas, NumPy, PyTorch, SKlearn, Google Colab, Git

Spring 2022

- Coordinated weekly meeting with a group of three to research an optimal heart failure prediction model.
- Utilized Python libraries to developed six different models to analyze our data sets, attempting to draw a correlation based on our patient's data
- Implemented KNN and Decision tree models to compare and determine the best accuracy.
- Took advantage of pre-processing methodologies to improve data fairness and accuracy: K-fold, fairness matrix, PCA
- Achieved a prediction accuracy as high as 93 percent, for a linear regression model, and as low as 63 percent using a decision tree without pre-processing.

#### **Discord Bot** | JavaScript, Discord Developer

Fall 2021

- Designed a discord bot to help incoming freshmen better navigate and utilize campus services using JavaScript.
- Leveraged puppeteers library to web scrape websites that refuse to provide external API to access data, such as events on campus and dining halls operation hours.