

## EDUCATION

### Texas State University

Bachelor of Science in Computer Science, Minor in Applied Mathematics

San Marcos, TX

May 2024

### Austin Community College

Associate of Science in Computer Science

Austin, TX

December 2020

**Relevant Coursework:** Object Oriented Programming, Data Structures and Algorithms, Calculus 1 & 2, Discrete Mathematics 1 & 2, Probability and Statistics, Linear Algebra, Machine Learning

## EXPERIENCE

### Charles Schwab

Austin, TX

Software Engineer Intern

June 2021 – August 2021

- Engineered and deployed dark mode compatibility for the Schwab Retirement App on Android, enhancing user experience and aligning with modern UI/UX standards.
- Enhanced the app's user interface by integrating a corporate-standard design library, ensuring a consistent and visually engaging user experience across the platform.
- Achieved first place in the business challenge summit after pitching to upper management on how Schwab can harness the power of existing social media platforms to educate, activate, and build confidence among beginner traders.

### Round Rock Sports Center

Round Rock, TX

Building Manager

January 2014 – Present

- Streamlined customer tracking processes by developing an Excel-based system, significantly reducing data entry time for logging customer presence.
- Delivered outstanding customer service, managing interactions with over 200 customers daily while ensuring smooth operational flow.
- Orchestrated event setups and equipment management, supervising and directing a team to efficiently handle facility operations and client reservations.

## PROJECTS

### Lung Cancer Likelihood Prediction System

- Built a machine learning system using logistic regression and XGBoost to predict lung cancer likelihood from 1M+ synthetic patient records across six medical datasets (e.g., demographics, conditions, medications).
- Engineered robust preprocessing pipelines using Pandas, Dask, and SMOTE to handle missing data, normalize features, and rebalance class distributions, improving model accuracy by 30% over the baseline.
- Visualized model behavior and feature relevance using correlation matrices, scatter plots, and XGBoost .plot\_importance(), identifying top predictors like blood pressure, ethnicity, age, and medication codes.

### Financial Management Portfolio System

- Developed a Financial Management Portfolio System (FMPS) using Python and MySQL, enabling user profile management and financial instrument tracking.
- Integrated live market data collection using the yfinance library, providing real-time updates for comprehensive investment tracking and decision-making.
- Implemented SQL-based queries for detailed investment analysis and reporting, enhancing users' ability to make informed financial decisions.

### Black Scholes Model Option Pricer

- Implemented functionality in Python to fetch and process live financial data using the Yfinance library, enabling accurate computation of market option valuations.
- Architected a Python-based financial model to calculate option prices using the Black-Scholes method.
- Currently refining a Dash-based interactive dashboard for Black-Scholes option pricing, aimed at providing a seamless user experience for complex financial calculations.

### Coronavirus Stat Tracker Voice Assistant

- Created a voice assistant using python that allows users to ask coronavirus related questions (i.e. number of cases and number of deaths by country).
- Scraped covid-19 data from a website using ParseHub software.

## TECHNICAL SKILLS

**Languages:** C, C++, Go, Kotlin, Python, SQL

**Developer Tools:** Android Studio, Atom, Bitbucket, Git, GitHub, Jupyter Notebook, MySQL, Oracle Database, Sublime, Terminal (Linux MacOS), VS Code, Visual Studio

**Libraries:** Matplotlib, NumPy, Pandas, Plotly, PyTorch, Seaborn, Scikit-learn, Yfinance