

Francisco Melgar

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EDUCATION

California State University Long Beach | Bachelor of Science in Computer Science

GPA: 3.3 | Expected Graduation: May 2024 | Honors: Dean's List with Great Distinction

SKILLS

Coding Languages: Java, C++, C, Python, SQL, NoSQL, HTML, Assembly, Kotlin, Android SDK

IDE/Text Editors: Microsoft Office Suite, Canva, Photoshop, Illustrator, IntelliJ, Linux, GitHub, Android Studio, Visual Studio, PyCharm

Technical: Software Development, Data Analysis, Full-Stack Development, Mathematics, Technical Writing

Certifications: Android Application Development Certification, SMAW Welding Certification

PROJECTS

Symmetric Cryptography | Python

September 2022 – October 2022

- Developed a custom symmetric encryption and decryption system in Python, utilizing the brute force method to demonstrate security vulnerabilities and enhance encryption algorithms.
- Implemented encryption and decryption functionalities using a symmetric algorithm, showcasing the need for strong key management and secure encryption practices.

Fibonacci Solitaire Game | C++

February 2022 - March 2022

- Developed a Fibonacci Solitaire game using C++ to implement the rules and mechanics of the Fibonacci sequence into an interactive gameplay experience.
- Employed object-oriented programming principles to structure the game, including classes for cards, the game board, and player interactions, resulting in an organized and maintainable codebase.
- Implemented the game logic to adhere to the Fibonacci sequence rules, allowing players to strategically arrange cards to match numbers in the sequence.
- Utilized algorithms and data structures to efficiently manage and evaluate moves, ensuring a challenging and enjoyable gameplay experience.

2D Pokémon Game | Team Leader

August 2021 - December 2021

- Developed a 2D Pokémon game using Java and applied strong object-oriented programming principles.
- Designed a hierarchical structure for Pokémon characters, enhancing code reusability and showcasing evolutionary relationships through inheritance, abstract classes, and interfaces, thereby enabling the creation of diverse Pokémon species with distinct traits and abilities.
- Utilized inheritance to design an extensible and modular architecture for various Pokémon species, abilities, and game mechanics, resulting in a scalable and maintainable codebase.

City Guide Android App | Java | HTML

September 2020 - October 2020

- Developed an Android application that provides an interactive view of attractions across various cities, offering comprehensive information, images, and seamless connections to their respective websites.
- Programmed a user-friendly interface to access city attractions utilizing Java, Kotlin, and Android SDK.
- Implemented a feature using Android WebView allowing users to directly connect to attraction websites from the application for additional information, bookings, and reservations.
- Utilized Android WebView components to seamlessly display the websites within the app, enhancing user accessibility and engagement with attractions.

WORK EXPERIENCE

TYC Investments Inc. | General Manager

June 2020 - Present

- Increased operational efficiency by 25% as measured by reduced production time and cost.
- Implemented process reengineering and automation to optimize workflow and resource allocation.
- Developed systems and procedures to improve operational quality and performance efficiency.

Long Beach City College ESL Learning Center | Instructional Assistant

September 2019 - June 2020

- Instructed 100+ students in basic language acquisition concepts related to the four language skills (reading, writing, speaking, and listening) in a personalized manner.
- Translated and Interpreted English-Spanish at orientations for 20+ people and individually for the English as a Second Language (ESL) Learning Center staff and students
- Created informative flyers, pamphlets, and other items of similar nature to promote the Center's activities.

VOLUNTEER EXPERIENCE

Society of Hispanic Professional Engineers | Academic Chair

August 2023 – Present

- Led weekly study sessions to support students in enhancing their understanding of course material and improve academic performance, while also coordinating and providing access to relevant learning resources such as textbooks and practice exams.
- Arranged group problem-solving exercises to enhance students' critical thinking and engineering problem-solving skills.

Society of Hispanic Professional Engineers | Web Master

January 2023 – August 2023

- Redesigned the website interface to enhance user engagement and navigation, resulting in a 30% increase in user interaction.
- Conducted usability testing to gather feedback for further refinements, incorporating user-centric design principles and feedback into website updates.
- Streamlined content management processes, resulting in a 20% increase in content publication frequency.