

# Francisco Melgar

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## EDUCATION

### California State University of Long Beach (CSULB)

*Bachelor of Science in Computer Science*

Long Beach City College, Long Beach, CA

*Associate of Science in Computer Science*

*Associate of Science in Mathematics*

Awards: Dean's List with Great Distinction.

Expected Graduation: May 2024

GPA: 3.3

September 2018 – June 2021

GPA: 3.4

## SKILLS

- Language: Native Spanish Speaker
- Computer Skills: Microsoft Office, Microsoft Excel, Canva, Photoshop, Illustrator, PowerPoint, Google Slides.
- Programming Skills: Proficient in Java, C++, Python, SQL, HTML.
- Relevant Coursework: Algorithms, Data Structure, Object Oriented Programming. SQL and NoSQL database management, mobile applications development.
- Android Application Development certification.
- SMAW Welding Certification.

## PROJECTS

### Tag-Based Social Media App

August 2023 – Present

- Conceived and envisioned a unique social media platform exclusively tailored for CSULB students, with a focus on fostering a connected campus community and enhancing student engagement.
- Developed a comprehensive concept outlining the platform's features, user interface, and functionalities, aligning with the specific needs and preferences of CSULB's student population.
- Conducted thorough market research to understand existing social media platforms and identify gaps and opportunities for a dedicated CSULB-focused platform.
- Engaged with the CSULB student community to gather insights and assess their preferences, expectations, and requirements, ensuring the platform's design addresses their unique needs effectively.

### 2D Pokémon Game

December 2021

- Led the development of a 2D Pokémon game utilizing Java programming language and applying strong object-oriented programming principles.
- Utilized inheritance to design an extensible and modular architecture for various Pokémon species, abilities, and game mechanics, resulting in a scalable and maintainable codebase.
- Designed and implemented a hierarchical structure for Pokémon characters, optimizing code reuse and representing evolutionary relationships using inheritance and utilizing abstract classes and interfaces to define common behavior and attributes, enabling the creation of diverse Pokémon species with unique traits and abilities.

### Symmetric decryptor and encryptor using a brute force method

September 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 chosen symmetric algorithm, showcasing the need for strong key management and secure encryption practices.

## WORK EXPERIENCE

### TYC Investments Inc.

June 2020- Present

#### General Manager

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

### LONG BEACH CITY COLLEGE ESL Learning Center

September 2019-June 2020

#### Instructional Assistant

- 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
- Trained 5 recently hired student aides.
- Created informative flyers, pamphlets, and other items of similar nature to promote the Center's activities.
- Instructed 100+ students in basic language acquisition concepts related to the four language skills (reading, writing, speaking, and listening) in a personalized manner.

## VOLUNTEER EXPERIENCE

### The Society of Hispanic Professional Engineers, CSULB

August 2023- Present

#### Academic Chair

- Established and led weekly study sessions to support students in enhancing their understanding of course materials and improving academic performance.
- Created a welcoming and inclusive environment that encouraged active participation and collaboration among students.
- Coordinated and provided access to relevant learning resources such as textbooks, practice exams, and additional study materials to supplement study sessions.
- Facilitated peer learning and tutoring opportunities during study sessions, promoting knowledge sharing and collaboration.
- Arranged group problem-solving exercises to enhance critical thinking and engineering problem-solving skills among students.

### The Society of Hispanic Professional Engineers, CSULB

January 2023- August 2023

#### Web Master

- 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 through the implementation of a content management system.