ANDREA LOPEZ

(956) 400-5439 | andreael@bu.edu | www.linkedin.com/in/andreael

EDUCATION & EXTRACURRICULARS

Boston University (BOSTON, MA)

BA in Computer Science & Psychology

Class of 2023   GPA: 3.52

Girls Who Code   **2021-Present**
- Reinforced my coding abilities through coding workshops in different programming languages
- Increased my confidence and understanding of the field by attending. different conferences and networking events

Society of Hispanic
Professional Engineers   **2021-Present**
- Attended conferences that increase awareness, support and empowerment for myself and the rest of the Hispanic community

IDEA College Preparatory (MISSION, TX)

Class of 2019   GPA: 4.53

National Hispanic Institute:
Collegiate World Series (CWS)   **June 2018**
- Introduced to Inquiry Based Learning (IBL) to promote creative thinking
- Furthered my team building skills by cooperating in developing solutions for current or possible issues involving the Latino community

National Honors Society (NHS)   **2017-2019**
Parliamentarian
- Modeled positive change by organizing multiple events, awareness activities and fundraisers to give back to the community
  - Hosted a marathon for cancer awareness and raised more than $200 for the Leukemia & Lymphoma Society through the Pasta for Pennies program

Student Council   **2017-2019**
- Developed effective leadership skills by voicing students' ideas, interests, and concerns with school faculty
- Raised funds and organized school events (such as STEM night, PROM, etc.) to foster school unity

Master's Innovators Program   **2016-2017**
Representative
- Handpicked by IDEA Headquarters to improve school conditions through the brainstorming and development of project ideas
  - Reinforced project management skills by successfully executing a plan to increase food selection by initiating a salad bar

ACADEMIC HONORS & AWARDS

Boston University

Dean's List   **Spring 2020-Present**

IDEA Mission College Prep

AP Scholar with Honors   **2019**

Salutatorian Award   **Class of 2019**

National Hispanic Institute:
Celebración   **Nov. 2018**

RELEVANT COURSEWORK

Introduction to Computer Science 1

Introduction to Computer Science 2

Combinatoric Structures

Geometric Algorithms

Computer Systems

Introduction to Analysis of Algorithms

Probability in Computing

Concepts of Programming Languages

SKILLS

Soft Skills

- Spanish Fluency   • Attention to Detail   • Teamwork
- Communication (Written and Verbal)   • Adaptability

Technical Skills

- Python   • Java/Javascript   • C/C++   • OCaml
- Docker   • VSCode   • SPSS Statistics   • Jupyter

PROGRAMMING PROJECTS

Interpreter & Compiler
Programming Language: OCaml
- Programmed an interpreter that takes in a string of commands and returns the desired output by using a stack language and coding parser combinators, Abstract Syntax Trees (ASTs) of different grammar (such as constants, programs, specific commands, and an environment), parser to read each AST, and implementing operational semantics for each type of command
- Designed an interpreter that directly compiled the input string to the desired value by using the semantics from the interpreter

Reverse Polish Notation (RPN) Calculator
Programming Language: C
- Built a stack-based calculator that takes in expressions written in RPN notation and pushes the result into a stack while making sure to account for possible errors by creating 8 source files to account for the declaration and implementation of nodes, the stack operations, the RPN evaluator, and the likely errors

Connect 4
Programming Language: Python
- Coded a Board class, detailing the rules of the game and how the board and checkers would be displayed, a Player class, specifying which symbol ("X" or "O") each player is using, a RandomPlayer class, designing the opponent computer player to randomly choose its next move from the available slots, and an AIPlayer class, programming the opponent computer player to "look ahead" before making its next move and consequently allow it to pick the best option available

Statistical Model of Text
Programming Language: Python
- Developed a statistical model of text that identified a particular author or style of writing by creating dictionaries that contained the frequency of different features (words, word lengths, word stems, sentence lengths, and punctuation) in a particular text
- Utilized the Naive Bayes scoring algorithm to produce a similarity score for each feature between a "mystery" body of text and two samples, which the program then analyzed and determined which of the 2 samples the "mystery" text most likely came from