Bryan Linares

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EDUCATION

California State University, Long Beach Aug. 2022- Expected May 2024

MS, Computer Science *Long Beach, CA*

- Relevant Coursework: Computer Architecture, Analysis of Algorithms, Artificial Intelligence, Computer Security

BS, Computer Engineering , Minor Computer Science Jan. 2017- Dec. 2019

- Relevant Coursework: Microprocessors & Controllers, Software Engineering, Machine Learning, SoC Design

Santa Monica College Feb. 2022 - June 2022

- Relevant Coursework: Introduction to Cloud Computing using AWS, Ethical Hacking

PROJECTS

Interpreter for BASIC-like language

Programming Language Design and Extension

- Implemented and extended a BASIC clone language with more than 20 functions to implement a Calculator.
- ~700 LOC in pure Java using the Eclipse IDE with a functionality tree designed in ANTLR.

Twitter Sentiment Analysis

Cloud Based AI Computing

- Python implementation of SepCNN Twitter Sentiment analysis on over 100000 tweets on a single GPU.
- Used Google Colab on a Kaggle provided corpus of Tweets to run a Naive Bayes Sentiment Analysis.

Senior Project: Rolling Arm

Machine Vision guided autonomous robot

- Developed C++ and OpenCV code for Realsense 3D Camera to detect for littered cans with 80% accuracy.
- Wrote Linux interface cron job code on UPBoard SBC to communicate with custom PCB and ARM controller.
- Assisted with Embedded C code for Robotic Arm's grabbing procedure controlled by an ARM Cortex 3.

GBRAINS: Extended MIPS Processor

Verilog Design and Verification

- Programmed and verified Verilog with hundreds of test procedures for the MIPS32 processor.
- Designed custom machine code instructions, circuitry,and processing cores for Floating Point and parallel 64 bit Vector operations.
- Developed in Xilinx ISE and Vivado and Run on a Nexys 4 DDR aka Nexys A7 FPGA.

FPGA Programmed UART

Verilog FPGA Implementation of System on Chip Design

- Instantiated a custom Soft Processor based on PicoBlaze, programmed in Assembly.
- Sends and receives custom UART messages to standard terminal.

SKILLS

- **Programming Languages:** Python, Java, C/C++, Embedded C, Verilog, Rust, Javascript
- **Tools:** Git, Linux, Xilinx ISE Design Suite, Vivado, Keil uVision, FPGA, ARM Microcontrollers
- **Foreign Languages:** Spanish (fluent)