Byron Garcia

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Software engineer with an appreciation for teaching, and respect for those who teach me

EDUCATION

University of California, Merced	Merced, CA
BS Computer Science & Engineering *Major GPA: 3.03*	Aug 2016 - May 2020

PROJECTS

Tic Tac Toe AI — Personal Project
Python — February 2019
* Implemented unbeatable AI with the use of the minimax algorithm to find optimal next move

* After each move, there is a display of decisions the AI goes through to find the optimal move

Gameboy Advance Sprite — Personal Project
C — January 2018
* Utilized GBA controls within program to move a sprite around the screen

* Used memory registers to integrate software efficiently to the GBA hardware

* Produced images and sprite movement on the screen with the use of various video modes

Breakout — Object-Oriented Programming
C++ — Fall 2018
* Two partners and I built replica of breakout, originally on the Atari, using OpenGL

* Utilized practices such as inheritance, polymorphism, and object classes

* Replica had fully functioning collision detection and textures layered using graphics library SOIL

Tic Tac Toe — Object-Oriented Programming
C++ — Fall 2018
* Created in OpenGL using object-oriented practices, with two modes PvP & PvCPU

* Player vs CPU had CPU choose the first available square, beginning at the top left square

TinyOS - Network Implementations — Computer Networks
nesC — Fall 2018
* Allowed ability to transmit messages between nodes, breaking up the message into packets

* Built on distance vector routing protocol, which finds the best path based on distance

* The routing protocol was integrated in conjunction with neighbor discovery and flooding protocols

Binary Search — Computer Organization
MIPS — Spring 2018
* Constructed a search algorithm in a low level assembly language using the MARS MIPS simulator

* User provided unsorted list and key, which the program sorted and returned the key if in the list

RELEVANT COURSES

Data Structures, Computer Organization, OOP, Computer Networks, Algorithm Design & Analysis

PROGRAMMING LANGUAGES

C++	Proficient	**C**	Proficient	**Java**	Intermediate
MIPS	Intermediate	**nesC**	Intermediate	**Python**	Basic
Tex	Basic	**HTML**	Basic		

SKILLS

* Collaboration	* Customer Service	* Linux	* Git
* Windows	* Bash Terminal	* MacOS	* OpenGL

AFFILIATIONS & CLUBS

* Sigma Chi Fraternity   * Super Smash Bros. Club   * Association for Computer Machinery