

Byron Garcia

byronogarcia@gmail.com · github.com/byronogarcia · linkedin.com/in/byronogarcia · (415) 827-7609

EDUCATION

University of California, Merced
BS Computer Science & Engineering

Major GPA: 3.03
Aug 2016 - May 2020

TECHNICAL EXPERTISE

Relevant Coursework: Algorithms and Data Structures, Object-Oriented Programming, Computer Architecture, Database Systems, Operating Systems, Software Engineering

Programming Languages: C++ (3 years), C (2.5 years), Java (1.5 years), Python (6 months)

Skills: SQLite Database, MIPS Architecture, Git, Linux, Bash, MATLAB, Xcode

PROJECTS

BeatFit

February 2020 - May 2020

Swift

- * Tasked to develop and expand on an application from our sponsor, Heartbeat LLC
- * A group of four of us constructed a iPhone application with data transfer capabilities from the Watch
- * The Apple Watch application was modernized and reworked with an additional module
- * Made use of Swift APIs and a CocoaPods addition to record and represent hear rate data

Super Smash Bros. Database

September 2019 - Present

SQLite, Swift

- * Built a Super Smash Bros. Database using SQLite to display the many relations within the game
- * Employed queries to extract specific data from the database, utilized keys to relate various tables
- * Looking to then connect the database with a Swift language layer, presenting the data in an iOS based application

nachOS - Operating System Implementations

August 2019 - December 2019

Java

- * Developed operating system functions on the nachOS instructional software
- * Constructed synchronous send and receive messaging system using condition variables
- * Expanded function to allow management of memory, loading the program in the virtual memory

Cache Simulator

October 2019 - December 2019

C

- * Used concepts taught to make a functioning cache, represented with a provided GUI
- * The cache simulation supported two replacement policies: LRU and Random
- * Manipulated inputted 32 bit address to extract tag, index, and associativity

Gameboy Advance Sprite

January 2018

C

- * 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

September 2018 - December 2018

C++

- * 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

AWARDS

UC Merced Mobile App Challenge: BeatFit

Winner

- * Competing with four other teams, ours developed the best iteration of BeatFit