Emmanuel Gallegos

Computer Science Student

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Education

2017-2019 **AS Mathematics, AST Computer Science**, *Chabot College*, Hayward - CA.

2019-2021 **B.Sc Computer Science (in progress)**, *CSU East Bay*, Hayward - CA, Expected Graduation: January, 2021.

Work Experience

2019-Current **Coding Instructor**, *KidzToPros*, SF Bay Area.

I teach coding in various elementary schools across the San Francisco Bay Area in after-school programs. In particular, I teach Introduction to Coding and Introduction to Game Design, using the Scratch programming language. As a private contractor, I have the privilege of being able to doctor the curricula as I see fit, and I frequently design my own games and exercises to keep my students engaged in the material. Unfortunately, Covid-19 has temporarily closed our in person operations.

2018–Current **Peer Tutor**, *Private Practice (Paid)*, Chabot College, CSU East Bay.

After a few classmates approached me to ask if I tutored, I decided to begin a private practice at Chabot College. Starting with Assembly Language Programming, I expanded tutoring to other courses and maintained it through my transfer to CSU East Bay. This past semester, I tutored for Automata and Computation; this semester, I am tutoring for Programming Language Concepts, Artificial Intelligence, and Software Engineering. I must stress that I don't do any work *for* my classmates and instead offer true support through one-on-one teaching using my honed communication skills and rigorous understanding of the material.

2016-2017 **Brain Coach**, *Marbles, the Brain Store*, Fisherman's Wharf, San Francisco.

I worked as a 'Brain Coach,' a moniker somewhat akin to the Apple Store's 'Genius,' at Fisherman's Wharf. In essence, I was a sales representative, though in practice my job largely consisted of teaching international tourist families how to play unique learning-based board games. Although it was quite literally 'all fun and games,' it *did* also help solidify my communication and teaching skills, as well as expand my emotional intelligence overall.

Programming

C++ My strongest programming language: I learned how to code up to data structures in C++, and am familiar with the C standard library. As a personal project, I used C++ to build a Kakuro solver using recursive backtracking.

Java My first programming language: I am comfortable writing large scale projects in Java, including Android applications, and as a senior am using Java as the primary language for my Software Engineering course.

Python My favorite programming language: I picked up Python this fall as my go to language for academic projects. I've used Python to build threaded applications in Operating Systems and to build an AI agent that can beat any human player in Othello.

JavaScript During my Web Development course, I've become extremely familiar with JavaScript, which we've used to build full-stack web applications with React.

HTML/CSS In addition to JavaScript, I've naturally become quite familiar with HTML and CSS to create and style web pages and applications.

LISP I picked up LISP over the course of my Artificial Intelligence course, as it is nicely optimized for symbolic logic which plays a large part in designing agents for use in AI. I converted my Python AI agent capable of beating any player in Othello to run using the LISP interpreter.

Prolog I picked up Prolog in the same AI course in order to build a very simple expert system capable of classifying works into literary periods and genres.

UNIX I began learning UNIX in an Introduction to UNIX course, which I received an A in, and have also set up a personal dedicated Linux server for hosting video game sessions between friends. My academic experience includes use of the VIM text editor, regular expressions, and BASH scripting.

Git/GitHub I have experience imposing version control on team projects using the Git BASH shell and through integrated plugins for IDE's such as IntelliJ IDEA and Eclipse. Many of my major programming projects can be viewed at my GitHub profile.

Achievements in IEEE

Xtreme I participated and placed in IEEE's Xtreme 24-hour hackathon. Our team, comprised of three undergraduate students, placed fifth in the West Coast region, which included teams from schools across California, Oregon, Washington, and Montana, and placed thirteenth in the country. We competed with students at both the undergraduate and graduate levels and ranked in the 95th percentile internationally.

Micromouse I am coordinating and participating in a Micromouse engineering competition among various California university IEEE chapters which will be hosted at our campus (CSU East Bay) this fall, Covid-19 allowing. The competition involves building and programming an autonomous robot to navigate an optimal route through a modular maze in the fastest time possible. For my team, I've personally solved the algorithmic problem of mapping and solving the maze, and am now doing as much as I can at home to work on the actual robot using an Arduino kit.

Other Knowledge Areas

Academic LaTex, Mathematica, Microsoft Office Suite

Languages English—Academic, Spanish—Casual

Personal Digital Music, Creative Writing