

Matias Tejada Astaburuaga

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EDUCATION

Purdue University, West Lafayette, IN, USA
BS in Computer Science (In Progress)
Honors: Fall 2019, Spring 2020, Fall 2021

Enrolled: Aug 2019 — Paused: May 2023
GPA: 3.4/4

PROJECTS

Java Compiler

Jan 2023 - May 2023

- Developed a compiler that dynamically generates executable ARM Assembly code for a subset of the Java programming language
- Written in C/C++ for code generation and Lex/Yacc for parsing the grammar into an abstract syntax tree and symbol table

Custom UNIX Shell

Jan 2022 - May 2022

- Developed an UNIX shell that implements a terminal command line which parses and executes user input
- Input can include commands and their arguments, pipes for passing the output of one command as the input for the next, and I/O redirection for files
- Bonus features include handling environment variables, nesting a child shell within a parent shell, and expanding wildcards using regular expressions and recursion
- Written in C/C++ for shell logic and Lex/Yacc for parsing user input

Word Guessing Game

Nov 2019 - Dec 2019

- Developed a word guessing game featuring an interactive graphical user interface and animations
- Written in Python using an open-source graphics library

SKILLS

- **Relevant Coursework:** Object Oriented Programming, Discrete Mathematics, C Programming, Computer Architecture, Data Structures and Algorithms, Systems Programming, Compilers, Computer Security
- **Programming:** Proficient in HTML/CSS, JavaScript, Python, Java, C/C++, Lex/Yacc, and ARM Assembly
- **Technologies:** Proficient in Git/GitHub, Visual Studio, IntelliJ, UNIX Shells, Wireshark/Nmap
- **Communication:** Fluent in Spanish, English, and Japanese