Dylan McGoldrick

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Education

Loyola Marymount University - LMU   Aug. 2019 – May 2023
Undergraduate Student in Computer Science   *Los Angeles, California*

- Languages and Automata I & II - Covered syntax, semantics, and pragmatics of Java, Python, JavaScript, TypeScript, Swift, and C++. Learned and wrote components of syntax-trees, grammars, and compilers.
- Algorithms - Utilized algorithms such as A* and heuristic searching for maze pathfinding, minimax with alpha-beta pruning, breadth and depth first searching, bloom filters, CSPs, spell-checking, etc. in Java.
- Artificial Intelligence (AI) - Taking this Fall 2022, learning about logical inference, machine learning, deep learning, search trees, and neural networks.
- Data Structures - Implemented different ADT's such as linked lists, stacks, queues, heaps, hash tables, sets, trees, and graphs in Java.
- Computer Systems Organization - Worked with machine instructions and instruction formats, assemblers and assembly languages and registers in C and Assembly.
- Web App Development - Successfully fetched APIs and built Web Apps deployed onto GitHub Pages and Firebase with React, Firebase/Firestore, and authentication in HTML, CSS, and JavaScript.

Projects

Senior Project (MusicMate)   2022-Current
https://github.com/izabela-ad/MusicMates

- A React app using the Spotify API to search for and retrieve users top tracks and top artists from time ranges of 4-weeks, 6-months, and All-time.
- Used Spotify scopes, access tokens, and authentication to have users log in with their personal Spotify accounts to view data.
- Created a web app that allowed users to create and login using a MusicMate account, which can be used to share personal music taste and interest.

Languages and Automata II (Compilers)   2022
https://github.com/Willr2001/VikingScript

- Deployed a nice-looking website to GitHub pages to show off the programming language we created.
- Wrote and designed our own language in a grammar in which we built our own compiler for.
- Wrote a tokenizer, AST, semantic analyzer, generator, and optimizer class to make a compiler that turned our language code into JavaScript.

Neo4j Database   2022

- Loaded a Neo4j database using an amazon data set found on kaggle that I was able to massage and delete all duplicates in.
- Used for displaying relationships between product and category nodes.
- Performed various queries on loaded data such as finding most no. of reviews, highest prices, product IDs, etc.

Movie List Now   2021
https://github.com/Willr2001/MovieListNow

- Worked with a team of students to develop React App deployed with firebase hosting.
- Fetches movie titles, date released, and a picture from a Movie API.
- Utilizes Google authentication and stores past searches into a firestore database.

Languages and Automata I (Languages)   2021
https://github.com/dylmcgold/LanguagesAndAutomata

- Wrote various programs in Java, Python, JavaScript, and Swift.
- Engaged with generators, pointers, streams, and emoji support in unicode.
- Solved problems concerned with scope of a binding, destructuring, and currying.

IEEE LED / Arduino   2019 - March 2020

- Re-visited project Christmas of 2022 using individually addressable LED strips around christmas tree, running programs I made such as snake and a fire.
- Collaborated with a team in the IEEE club(Institute of Electrical and Electronics Engineers) on a LED light strip that changed colors in response to different inputs, sound, light, infrared sensors, etc.
- Wrote simple code in Arduino IDE, learning syntax and commands in Arduino's language.
- Learned how to build circuits and implement small electronics such as buttons, resistors, and LEDs.

Skills

Programming Languages: Python, Java, C, C++, JavaScript, HTML, CSS, Swift, SQL
Frameworks/Technologies: : Git, PostgreSQL, MongoDB, Neo4j LaTeX, React, Node.js, Pytorch