Amithabh A

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CAREER OBJECTIVE

Learn from the industrial world to keep my technical abilities updated and contribute towards the growth of the company.

EDUCATION

Bachelor of Technology in Computer Science and Engineering	2021 - Present
Indian Institute of Technology Palakkad	*Current GPA: 8.37/10*
Higher Secondary Education (Class 12)	2021
Placid Vidya Vihar, Changanassery	*Percentage: 97.0*
Secondary Education (Class 10)	2019
Jawahar Navodaya Vidyalaya Kollam	*Percentage: 98.2*

PROGRAMMING SKILLS

- C++, C, Python

WORK EXPERIENCE

Data Science Intern (May 2024- July 2024) | *SATCARD*

2-month summer internship at SATCARD (Smart AgriTech Centre for Advanced Research and Development), Palakkad. Worked primarily on privacy-preserving machine learning libraries in Python.

PROJECTS

Abstract Syntax Tree Generator (Feb 2024- Apr 2024) | *C++, Lex, Yacc*   Link
- An abstract syntax tree generator, which takes a program in a C-like language, parses it, and generates an AST representation of the program.

Computational Tree Logic(CTL) Model Checker (March 2024- April 2024) | *Python, PLY*   Link
- A CTL Model Checker that takes a formula in CTL representation and a model in the form of a Kripke structure and returns the set of states of the model that satisfy the formula.
- Used PLY (the Python lex-yacc library) to parse the formula and convert it to an equivalent formula in which a minimal set of CTL operators are used.
- Implemented a bottom up CTL model checking algorithm that outputs the subset of states of input kripke structure that satisfies the formula(s) corresponding to the immediate sub trees of a node in the computational tree.
- Made sure that the time spent per node of the parse tree is atmost quadratic in the size of input kripke structure.

Dungeons, a tool to learn Artificial Intelligence (July 2023 - Dec 2023) | *Python, Pygame*   Link
- A group project that developed a software tool to learn Artificial Intelligence using Python and Pygame.
- Used Wumpus World logical game as an interface for enhanced learning experience.
- Designed modules for Classical Search, Adversarial Search and Reinforcement Learning which contains facility for writing, simulating and testing Artificial Intelligence algorithms in corresponding domains.
- Implemented autograders for each module that self evaluate and grade the code written by the users.

Landslide Prediction model for Idukki District (August 2022- Dec 2022) | *Pandas, VAEX, ArcGIS*   Link
- A classification model predicting landslides based on input values of six selected triggering factors at a specific point.
- Relevant data available from Google Earth Engine and Bhukosh is taken and processed using ArcGIS and Pandas.
- The model, trained using the random forest algorithm, demonstrated high accuracy with a precision of 94.77%, recall of 81.62%, and an F1 score of 87.71%.

POSITION OF RESPONSIBILITY

Yet Another Coding Club | *Club Associate*	May. 2023 – Present

Part of team which conducts Game Developement Workshops in the institute

Qriosity Quiz club | *Core team Member*	June 2022 – April 2024

Conducted SciTech and India quizzes