

Joel Varghese

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EDUCATION

McMaster University

Hamilton, ON

Bachelor of Applied Science - BAsC Computer Science, Honours Co-op

Sept. 2020 – May 2025

- Deans' Honour List award (2020-2023), McMaster President's Award
- GPA : 3.72/4
- Relevant Coursework: Algorithms and Complexity, Data Structures, Automata and Computability, Concurrent Systems, Databases, Computer Architecture, Operating Systems, Principles of Programming Language, Software Requirement and Security Considerations, Data Mining, Computer Networks and Security, Compilers

EXPERIENCE

Software Developer Co-op

Jan 2024 - Present

ATS Automation (C#,ASP.NET,React,TypeScript,Azure,Docker,SQL)

Cambridge, ON

- Implemented API endpoints for dynamic settings retrieval,enhancing interaction and seamless configuration.
- Led integration of multi-language support (En, Fr, De, Ch) in Illuminate 2.0, boosting user readability by 300%
- Integrated CSV export feature on Kendo data grids for streamlined export of filtered data.

Software Engineering Co-op

May 2023 - Dec 2023

Evertz Microsystems (Python,JavaScript,Ansible,Git,AWS(S3),Postman)

Burlington, ON

- Led development of ensuring Evertz Project StreamPro's offline functionality, boosting availability by 95%.
- Developed and integrated a per-channel bin list specification feature to enhance playout system functionality
- Designed and implemented secure and efficient index searching in our playout system with authentication
- Used Ansible to streamline and automate deployment, reducing manual effort by 90% and minimizing errors.

PROJECTS

Algorithmic Stock Trading | *Python*

Aug 2022 – Feb 2023

- Implemented current day Buy/Sell decisions in a open source algorithmic trading project
- Worked with yfinance library to get historical financial data from Yahoo Finance for backtesting
- Used moving average window as 50 which resulted in 500%+ increase in profits for some stocks like AMZN, AAPL when compared to a simple buy and hold strategy of last 15 years.

Image Generator | *Python*

Dec 2022 – Jan 2023

- Utilized DALL-E-2 api from OpenAI to create AI generated image from text description
- Implemented GUI using tkinter and used PIL for opening, manipulating and saving different image formats
- Added saving functionality to save the AI generated images to local device

ToDo List | *MongoDB, Express, React, Node.js*

May 2022 – Aug 2022

- Implemented a MERN Stack ToDo List application
- Added removing, editing and task complete functionality which updates in MongoDB Atlas
- Deployed it to a server using Heroku and Netlify

Pathfinding Visualization | *Python*

June 2022 – July 2022

- Increased efficiency by 60% by using A* algorithm for pathfinding
- Added ability to use walls between starting and ending point
- Implemented button functionality to start or reset the algorithm

TicTacToe | *C*

Apr 2022 – May 2022

- Implemented a TicTacToe game against AI using C
- Used minmax algorithm for AI choices which decreased AI losing chances by 100%
- Tested AI against online unbeatable programs and games always ended in draws.

TECHNICAL SKILLS AND PROFESSIONAL CERTIFICATES

Languages: Python, SQL,C,C#, JavaScript, Java, Typescript, HTML/CSS, Haskell, ELM, Matlab, Go

Frameworks: Express.js, React.js,Node.js, ASP.NET, FastAPI, Angular

Dev Tools: Git,Docker,Azure,MySQL,AWS(EC2,S3),MongoDBCompass,VSCode,Linux,Postman, Heroku,VMware

Libraries: Pygame, NumPy, Matplotlib, yfinance, OpenCv, Mongoose, Material-UI, pandas

Certificates: AWS Certified Cloud Practioner