

# Pavithran Chelliahpillai

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## EDUCATION

### University of Waterloo

*Bachelor of Software Engineering, Honours, Co-operative Program*

Waterloo, ON

*Sep. 2024 – Aug. 2029 (Exp.)*

## EXPERIENCE

### HTS Engineering

*Software Engineering Intern*

Jun. 2024 – Aug. 2024

Toronto, ON

- Developed a database system to index projects and snippets for future repurposing
- Developed a full-stack web application using Django, JS, Node.js, PostgreSQL, and MySQL
- Utilised polynomial rolling hashing and developed a latent semantic search indexing algorithm for accurate retrieval of indexed items

### Principle Air Systems

*Automation Systems Programming Intern*

Jun. 2022 – Present

Vaughan, ON

- Assisted HVAC engineers with creating technical drawings and related integrated graphics of buildings' systems
- Gained technical knowledge of air systems, and the importance of the design process when planning a building's layout
- Applied programming expertise in automotive programming systems across large-scale projects

### Narpavi Consultancy

*Founder, CEO, Freelance Web Development Firm*

Jan. 2024 – Present

Mississauga, ON

- Developed front-end and back-end web applications and sites for companies and organizations
- Utilised HTML, CSS, and JS within a Svelte framework to create captivating websites with heavily optimised, high performance code
- Portfolio of work: [Kanthavanam](#), [Principle Air Systems](#), [Personal Site](#)

### Oakville Swim Academy

*Swim Instructor*

Feb. 2023 – Jul. 2024

Oakville, ON

- Worked with 100+ students of all skill levels and abilities from beginners to Olympic levels
- Collaborated with deck supervisors, operational managers, and parents to provide high quality lessons

## PROJECTS

### TrainTrack | C++, Armadillo, Dlib, QuantLib, React.js, PostgreSQL

Mar. 2024 – Present

- Developed a webapp to back-test user-created stock strategies through artificial intelligence
- Recognizes distinctions in price action between technical (chart-based) analysis and fundamental (event/news-based) analysis at a high degree
- Utilizes a C++ stack with Armadillo as the main artificial intelligence library for efficiency, coupled with a React frontend

### LEGOify | Python, C++, React, Django, MySQL

Jan. 2022 – Aug. 2023

- Created an app designed from scratch to allow users to take a picture of any item and instantly receive pictorial instructions on how to create a 3-D LEGO model of the object
- Applied a divide-and-conquer algorithm with dynamic programming techniques to optimize solutions for large scale models, along with photogrammetry artificial intelligence technology

## AWARDS AND HONOURS

**Academic:** Recipient of the [Governor General of Canada's Academic Medal of Excellence](#) (99.83% average)

**Scholarships:** [UWaterloo President's Scholarship of Distinction](#), [UWaterloo Alumni@Microsoft](#) (Offered), [\\$15,000 UofT President's Scholar of Excellence](#) (Offered)

References available upon request