# Pavithran Chelliahpillai

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## EXPERIENCE

**HTS Engineering** — Jun. 2024 – Aug. 2024
*Software Engineering Solutions Subcontractor* — *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** — Jun. 2022 – Aug. 2024
*Automation Systems Programming Intern* — *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 automative programming systems across large-scale projects

**Narpavi Consultancy** — Jan. 2024 – Present
*Founder, CEO, Freelance Web Development Firm* — *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** — Feb. 2023 – Jul. 2024
*Swim Instructor* — *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

## EDUCATION

**University of Waterloo** — Waterloo, ON
*Bachelor of Software Engineering, Honours, Co-operative Program* — *Sep. 2024 – May. 2029 (Exp.)*

## 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