

# PARHAM KHAMSEPOUR

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## PROFILE

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Experienced and hardworking individual with a Master of Science in Computer Science and over six years of experience developing software and websites. Specialized in machine learning and artificial intelligence with a strong background in algorithms and data structures. Having the ability to perform research in the field of computer science through dynamic programming. As a freelance computer engineer, being knowledgeable and capable of using a variety of programming languages to develop software and websites. Having experience in full-stack web development and mentoring and providing guidance and instruction to students at Lighthouse Lab in Canada. Dedicated and hardworking developer who is eager to work in a dynamic team to acquire more knowledge and experience in the field of expertise.

## SKILLS

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### Web Development

Node.js, React, MVC, RESTful API, TypeScript, Ruby on Rails  
AWS, PHP, C#(ASP.NET), SCSS, CSS, HTML, JavaScript, Laravel  
GraphQL, Next.js, Nest.js, Python(Django), Java(Spring)

### Databases

Database Design, ERDs, RDBs, SQL, MongoDB, PostgreSQL

### Mobile Development

Swift, SwiftUI, React Native, MVVM, Java, Flutter, Objective-c, Kotlin

### Machine Learning and Data Science

Python, Supervised & Unsupervised models, NNs, CNNs,  
Hadoop, Big Data, Anaconda, Q-Learning

### Problem Solving

Dynamic programming

### System Programming

C, C++, Linux, Bash

### Others

OOP, CI/CD, Git, IPE, Adobe Photoshop, L<sup>A</sup>T<sub>E</sub>X, Microsoft Office

## WORK EXPERIENCE

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### AgileIS Co

2023-Present

*Software Developer*

- developing new features and maintaining **CAPT**, a concussion detection application, as a software developer working with technologies such as GraphQL, NestJS, React Native, Prisma and PostgreSQL.

### Lighthouse Labs Co

2022-2023

*Full-Stack Web Development Mentor*

- Demonstrated expertise in a diverse range of technologies including Node.js, React, Express.js, Ruby on Rails, Algorithms, Data Structures, Databases, and PostgreSQL.
- Assisted students in understanding complex programming concepts and troubleshooting code, leading to improved proficiency in web development.
- Provided mentorship and hands-on experience to students, facilitating the development of their technical skills and helping them achieve their professional goals.
- Successfully served as a Web Development Mentor at Lighthouse Labs, providing guidance and instruction to over 1000 students in the areas of web development and programming.

### University of Windsor

2021-Present

*Graduate Teaching & Research Assistant*

- Working as graduate teaching assistant and lab instructor for different undergrad courses. During this time I have assisted teachers with instruction and provided clerical support for diverse needs.

- Specialized in AI with expertise in problem-solving, algorithms, and data structures under the supervision of [Dr. Ahmad Biniiaz](#).
- Conducted research on the Minimum Consistent Spanning Subset problem, an NP-complete problem.

## Motion Gestures Co

2021

*iOS & Image Processing Developer*

- Demonstrated experience in utilizing Swift to implement efficient and effective image processing tasks.

## EDUCATION

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### Master of Computer Science

2021-April 20, 2023

*University of Windsor*

**Thesis:** The Minimum Consistent Spanning Subset problem on trees

**Project:** The implemented algorithm to solve the MCSS problem can be found [here](#). This implementation was done using p5.js framework.

**Supervisor:** [Dr. Ahmad Biniiaz](#)

**GPA:** 94.56/100

### Bachelor of Software Engineering

2016-2020

*IKIU*

**Project:** Designing the ERD and implementing a large online workout planning application.

**Technologies:** SQL - Laravel - PHP - Javascript

**Honors:** Graduating within the first 10% of students. Selected for computer Olympiad team of university. Participated in the ICPC international collegiate programming contest as a member of the my universities team.

**GPA:** 17.66/20

## PROJECTS

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### CV Website

- The CV website is developed using React. It can be shared and used open sourced as all of the inputs come from a single JSON file.

### Local Search Engine

- This project was developed as a final project for my Information Retrieval course. We managed to create a simple search engine with ranking that would search on a local dataset. JAVA was used for this project.

### FitSho

- FitSho was a website that provided users with workout and dietary plans. This website was developed completely by me using Laravel and Bootstrap. Also The database design of this project was so complicated that was used as my Bachelors degree' final project.

### CNN Model for Plant Disease Diagnostic

- Utilized Convolutional Neural Networks, and Transfer Learning techniques to develop and implement multiple models for accurate classification of different types of diseases on leaves in a machine learning project.

### CNN Model for Steel Defects Detection

- Researched steel defect detection using Convolutional Neural Networks, and Transfer Learning using Resnet50 and Xception architectures.