

# Nicholas Lee

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## Technical Skills

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**Languages:** Python, C++, C#, Java, HTML, CSS, JavaScript, TypeScript, SQL and RStudio

**Frameworks:** Django Web Framework and React

**Algorithms:** Dynamic Programming, Divide & Conquer, Greedy, Graph Traversals (e.g. BFS, DFS, Dijkstra's)

**Other Software:** SQLite, Power BI, RDS, Git, Visual Studio, Hardware Abstraction, MS Office Tools, Linux Scripting, Concurrency, Bash

## Projects

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### Implementation of Minimax Algorithm with HTML, CSS, and Javascript | Jan 2023

- Implemented Minimax, a backtracking algorithm, to create an [Unbeatable Tic-Tac-Toe Game](#)
- Algorithm implemented with JavaScript, and the responsive UI was made using **HTML** and **CSS**

### Chess Game with C++ Focusing on OOP Principles | Dec 2021

- Over the course of 2 weeks, used **C++** to create an [Interactive Chess Game](#) interactive chess game with multiple difficulty modes and an interactive GUI using fundamental **OOP** principles
- Techniques include: Encapsulation, Inheritance, Observers and Decorators, RAII, Debugging, Automated Testing, MVC and Exception handling

### Personal Website with HTML, CSS, and Javascript | April 2022

- Applied **HTML**, **CSS** and **JavaScript** fundamentals to create a personal online [Website Portfolio](#)

## Professional Experience

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### Tigercat Industries - Software Developer | Jan 2023 - Apr 2023

- Designed, tested, documented and deployed applications and services using **C++**, **C#** and **.NET**
- Produced a finished **C#** Windows GUI which allowed users to complete engine diagnostics to generate meaningful reports allowing for increased safety and efficiency
- Implemented multithreading techniques to retrieve device information for processing using **C++** and **C#**
- Used Hardware Abstraction techniques to create a **HAL** which facilitated the cross-compatibility between different operating systems and targets
- Created new features for front and back-end systems and integrated them with machine controls and telematics systems allowing for cross-device compatibility
- Constructed a **C++** module which facilitated the execution of simple queries on a SQLite database

### OnCall Health - Junior Solutions Engineer/Account Coordinator | Jan 2022 - Apr 2022

- Increased efficiency of back-end processes through **Python** scripting and automation
- Implemented critical thinking to create automated testing and ensure coverage of all test cases
- Managed the workflow of multiple customer accounts to meet the expected client/patient journeys
- Effectively worked with the **Django** database system in order to modify and maintain client information and privacy

## Honours & Awards

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- Consulting Case Competition | Toronto Dominion (TD) Bank - iD8 | Semi-Finalist
- University of Toronto National Book Award
- Aldershot Ontario Scholar Award & Governor General's Medal

## Education

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### University of Waterloo - Computer Science | September 2020 - April 2025

### Wilfrid Laurier University - Business Administration | September 2020 - April 2025

*Double-Degree program*

- University of Waterloo President's Scholarship of Distinction | 2021
- Consistent Excellent Standing at both University of Waterloo and Wilfrid Laurier University