

# Karim Benhallam

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## PROGRAMING LANGUAGES AND FRAMEWORKS

|            |            |         |          |
|------------|------------|---------|----------|
| C#         | TypeScript | HTML    | XUnit    |
| Java       | SQL        | CSS     | Maven    |
| Python     | C++        | Angular | Selenium |
| JavaScript | ASP.NET    | React   | JUnit    |

## EDUCATION

### Bachelor of Applied Science, Software Engineering

*University of Ottawa*

2019- 2024 (expected)

Ottawa, ON

### Capstone Project

January 2023– December 2023

- Developed a web application to aid research institutes in identifying researchers in specific fields, employing boolean search functionalities for precise and efficient results
- Collaborated with the newly-formed "DataHub" team to integrate untapped data sources, establishing crucial pipelines vital for the web application's success in facilitating researcher outreach.
- Implemented Azure Synapse Pipelines to construct a robust database infrastructure, optimizing data flow and processing efficiency to seamlessly integrate with the web application
- Utilized a diverse set of technologies, leveraging C# for the backend logic, Angular for the frontend user interface, SQL Server for database management, and LINQ for streamlined data querying and manipulation

## WORK EXPERIENCE

### Research Assistant

*Department of Linguistics, University of Ottawa*

May 2023- Present

Ottawa, ON

- Enhanced Python script to create database files from scanned HTML data, facilitating the digitization of two distinct Cham language dictionaries
- Developed a user-friendly GUI using Python for the linguists to merge both dictionaries into a comprehensive database, streamlining the data consolidation process.
- Provided technical support and responded to inflowing programming request by implementing software requirements, and providing high level overviews of programming activities to an interdisciplinary team of researchers
- Utilized C# programming to modify the FieldWorks source code, incorporating unique software features, including classification of characters as page numbers or line numbers when pasting text, enhancing the usability and efficiency of the application
- Made strategic decisions to leverage FieldWorks database files over SQL tables, optimizing the software's performance and data management capabilities.

**Full Stack Developer**

May 2022- August 2022

*Conceptio Technologies*

Québec, QC

- Designed and constructed a user-friendly web application, using Angular, ASP.NET and Auth0
- Facilitated discussions with clients and stakeholders to implement their feedback throughout the application design process
- Tested backend functions of the web API using XUnit framework, while maintaining code coverage above 80%
- Improved proficiency in TypeScript and C# through effective team collaboration
- Implemented user authentication and role-based access control using Auth0

**Web Developer**

September 2021- December 2021

*EUC Service Evolution, Innovapost*

Ottawa, ON

- Analyzed out of date websites and source codes in HTML, CSS, JavaScript, Bootstrap and Media Queries revealing malfunctioning features and optimizing user experience
- Identified areas of improvement by contrasting the web portal to existing self-help content pages
- Updated user self-help content using HTML and CSS to provide relevant solutions to common staff IT problems
- Developed an accessible self-help web portal prototype using SharePoint Online

**Web Content Coordinator**

January 2021- April 2021

*Faculty of Engineering, University of Ottawa*

Ottawa, ON

- Led migration project, transferring faculty and staff information from their personal web pages to a university platform, Uniweb
- Coordinated tasks such as updating and creating web pages to engage students in Faculty events
- Provided direct support to faculty and staff seeking assistance, information, resources related to university platforms and personal web pages
- Organized speaker panels which included students and staff from the Faculty of Engineering to present information to future engineering students

**PROFESSIONALS SKILLS****Software Engineering**

- Knowledgeable in various programming languages and frameworks (discussed in *Programming Languages and Frameworks*)
- Extensive experience using web development tools through multiple class projects and internships
- Autonomy and problem-solving skills displayed through the development of an AI powered stealth game
- Experience in Software Testing acquired through classes as well as internships

**Leadership**

- Decision making and time management skills have enabled to prioritize tasks and effectively discharge duties
- Communication and interpersonal skills have allowed to integrate client feedback in decision making and project execution
- Supervision skills have allowed effective task delegation while maintaining a positive work environment
- Bilingualism (fluency in English and French) has allowed me to communicate with coworkers in their official language of choice