Leen **Alzebdeh**

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# SUMMARY

# Computing science student in my fourth year at the University of Alberta. Some of my qualifications include:

# Contributed to the successful deployment of a business website as a JavaScript developer.

# Worked as a Django backend developer to create a social network platform web app.

# Trained, tuned, and deployed various machine learning (ML) models with PyTorch and TensorFlow.

# Customized artificial intelligence (AI) models, such as YOLOv5, for computer vision applications.

# WORK EXPERIENCE

## SEPtember 2022 – DECember 2022

## Frontend Developer | Zero RampUp Edmonton, AB

* Collaborated in a 7-member team to develop and deploy a business website using JavaScript (React ES6).
* Utilized Agile methodology with weekly stand-ups and sprint planning.
* Developed custom React Hooks to facilitate seamless retrieval of asynchronous data from a REST API and dynamically update website components.
* Engaged in pair programming with frontend developers and conducted code reviews to ensure code quality.

## 2020 – PRESENT

## Tutor | Paper Edu Edmonton, AB

## Tutor K-12 students in computer science and mathematics, earning an average of 94% positive reviews.

* Provide code review for computer science students in Java, Python, C and JavaScript.

## JULY 2022 – PRESENT

## Street Team Member | Reverb Communications Edmonton, AB

* Established booths to educate the public on train-related safety ahead of the valley train line opening.
* Engaged large audiences, reaching 80+ persons per hour regularly.

## JULY 2018 – AUGUST 2018

## Intern | University of Alberta: Department of Computing Science Edmonton, AB

## Collaborated on a 6-week research project to optimize the performance of a program that simulates the board game Hex, mainly through refactoring and rewriting existing code.

## Presented the research findings to a 30+ person audience.

## Completed duties ahead of schedule and took initiative to advise another team.

# EDUCATION

## Bachelor of Science, Specialization in Computing Science | University of Alberta, Edmonton, AB | 2020 - 2024

# PROJECTS

**Autonomous Robot Driving Using Robot Operating System (ROS)** | [Project Link](https://leen-alzebdeh.github.io/projects/412_final_project/)

## Developed ROS packages to enable a robot (Duckiebot) to autonomously navigate miniature roads using image processing to drive parallel to yellow road lines.

## Trained a TensorFlow-based deep learning model (detectron2) on a custom dataset of images to detect rubber ducks and other Duckiebots and avoid collision.

## Django Backend Developer | [Project Link](https://leen-alzebdeh.github.io/projects/404_project/)

## Contributed to a team of 5 to develop a blogging/social network platform web app that is linked with other teams’ unique APIs and can aggregate activity from their web servers.

## Built the app's backend, integrated APIs, and wrote unit tests in Django.

## Linear Regression, Neural Networks and SVM to Predict Edmonton’s Weather | [Project Link](https://leen-alzebdeh.github.io/projects/466_final_project/)

## Implemented linear regression, neural networks, support vector machine (SVM) algorithms to predict temperature and precipitation using Edmonton's daily weather dataset.

## Semantic Image Segmentation on MNISTDD-RGB | [Project Link](https://leen-alzebdeh.github.io/projects/328_segmentation/)

## Customized a U-Net model for image segmentation on the MNIST Double Digits RGB dataset and achieved 86% accuracy.

## Android Developer | [Project Link](https://leen-alzebdeh.github.io/projects/301_habit/)

## Collaborated in a team to create a social media Android app using Java, XML and Cloud Firestore.

## Implemented a map to share a post’s location, with address search and selection using Geolocation API.

## Employed JUnit for unit testing to enhance code quality and prevent bugs.

# SKILLS

## Languages: Python, C, Java, Julia, JavaScript/ TypeScript, SQL, HTML/CSS, XML.

## Technologies: React, Django, Android, Git, JUnit, Docker, NumPy, PyTorch, Keras, TensorFlow, Pandas, Linux.

* Databases: MongoDB, PostgreSQL.

# RELEVANT COURSEWORK

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| CMPUT 328: Visual Recognition   * Implemented supervised and unsupervised machine learning methods, such as Autoencoders, AC-GAN, VAE, Vision Transformers, LTSM, and unsupervised domain adaptation. |
| CMPUT 291: File and Database Management   * Explored entity-relationship model; relational model, and implemented projects in SQL, and MongoDB. |
| CMPUT 204: Algorithms I   * Explored and implemented many searching, sorting, and graph algorithms. |
| CMPUT 366: Introduction to Artificial Intelligence   * Implemented a Q-learning algorithm to solve a maze problem. * Explored algorithms to solve deterministic shortest path problems, such as A\*, heuristic depth search, and branch and bound. |
| CMPUT 401: Software Process and Product Management   * Demonstrated best practices in software projects and product development. |