LEEN **ALZEBDEH**

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HIGHLIGHTS

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

- Trained, tuned, and deployed various machine learning (ML) models in PyTorch and TensorFlow.
- Customized ML models, such as YOLOv5 and U-Net, to perform object detection and image segmentation.
- Trained in AI and reinforcement learning algorithms, including A* search, Q-learning, and heuristic search.
- Worked as a JavaScript developer in a team and deployed a fully functional website.

WORK EXPERIENCE

SEP 2022 – DEC 2022

FRONTEND DEVELOPER | Zero RampUp — Remote

- Worked in a team of 7 and maintained, developed, and designed a subscription website using JavaScript (React with ES6).
- Worked in an Agile environment with weekly stand-ups and conducted 2 hours of sprint planning per week.
- Created a custom React Hook, which handles asynchronous data retrieval from REST API, to display subscriptions.
- Pair programmed with 3 frontend developers and reviewed the team's code to ensure quality.

2020 – PRESENT

TUTOR | Paper Edu — Remote

- 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.

JUL 2022 – OCT 2022

VALLEY STREET TEAM MEMBER | Reverb Communications — Edmonton, CA

- 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.

JUL 2018 – AUG 2018

INTERN | University of Alberta: Department of Computing Science — Edmonton, CA

- Conducted a 6-week research project, in collaboration with an intern and a team of graduate students, to optimize the performance of a program that simulates the boardgame Hex, mainly through refactoring and rewriting existing code.
- Presented the results of the research to a 30+ person audience and answered questions.
- Achieved duties 1 week ahead of the deadline and took initiative to advise another team.

PROJECTS

AUTONOMOUS ROBOT DRIVING USING ROBOT OPERATING SYSTEM (ROS) | CMPUT 412

Project: https://leen-alzebdeh.github.io/projects/412_Final_Project/

- Wrote ROS packages to make an autonomous driving robot (Duckiebot) on miniature roads, using image processing to drive parallel to yellow road lines.
- Trained a deep learning model (detectron2), in TensorFlow, on a custom dataset of images of rubber ducks and other Duckiebots, in order to detect these objects and avoid crashing into them while driving.

SEMANTIC IMAGE SEGMENTATION ON MNISTDD-RGB | CMPUT 328

Project: 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.

LINEAR REGRESSION, NEURAL NETWORKS AND SVM TO PREDICT EDMONTON'S WEATHER | CMPUT 466

Project: https://leen-alzebdeh.github.io/projects/466/

- I implemented three machine learning algorithms: linear regression, neural networks, support vector machine (SVM) to predict temperature and precipitation. I trained on Edmonton's daily weather dataset.

DJANGO BACKEND DEVELOPER | CMPUT 404

Project: https://leen-alzebdeh.github.io/projects/404_project/

- Worked in a team of 5 to create a blogging/social network platform web app that is linked with other teams' unique APIs and can aggregate activity from their web server.
- Was responsible for building the app's backend and for linking our API with other teams' APIs.
- Wrote automatic unit test scripts in Django to validate new code functionality.

ANDROID DEVELOPER | CMPUT 301

Project: https://leen-alzebdeh.github.io/projects/301_habit/

- Worked in a team to create a fully functional social media app using Java, XML and Cloud Firestore.
- Implemented a map, to share a post's location, with address search and selection using Geolocation API.
- Used JUnit to build unit testing that prevents bugs and dramatically improved code quality.

EDUCATION

Bachelor of Science, Specialization in Computing Science | UNIVERSITY OF ALBERTA 2020 - 2024

Edmonton, CA

Bachelor of Science, Specialization in Physics| UNIVERSITY OF ALBERTA 2019 - 2020

Edmonton, CA

TECHNICAL SKILLS

- Languages: Python, C, Java, JavaScript/ TypeScript, SQL, HTML/CSS, XML.
- Technologies: React, Android, Git, JUnit, Docker, NumPy, PyTorch, Keras, TensorFlow, Pandas, Linux.
- Databases: MongoDB, PostgreSQL.

RELEVANT COURSES

CMPUT 328: Visual Recognition

- Implemented supervised and unsupervised machine learning methods, such as Autoencoders, 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

- Practiced best practices in software projects and product development.