

Leen Alzebdeh

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HIGHLIGHT OF SKILLS

Master's student at the University of Alberta with **3+ years** of hands-on experience in Python-based data science and AI. Some of my qualifications include:

- **Primary researcher** on a project developing machine learning models using time-series medical data.
- Presented first-author research at **European Association for the Study of Diabetes (EASD) 2025** (Vienna) — one of the world's largest diabetes conferences (**14,000+** attendees).
- Experienced in **end-to-end data science**, including feature engineering, model design, and evaluation using TensorFlow, PyTorch, and scikit-learn.
- Applied **computer vision** and **NLP** techniques, such as YOLOv5 for object detection and Naive Bayes for semantic text classification.

EDUCATION

Master of Science, Specialization in Translational Medicine

September 2024 – April 2027

University of Alberta, Edmonton, AB

Supervisor: Anna Lam, MD

- GPA: **3.9**
- Related coursework: Time Series Analysis, Image Registration.

Bachelor of Science, Specialization in Computing Science

2020 – 2024

University of Alberta, Edmonton, AB

- First Class Standing (**GPA>3.5**)
- Related coursework: Artificial Intelligence Capstone, Visual Recognition (computer vision), Introduction to Natural Language Processing (NLP), Machine Learning, Software Process and Product Management.

SKILLS

- **Languages:** Python, C, Java, Julia, JavaScript/ TypeScript, SQL, HTML/CSS, XML.
- **Technologies:** NumPy, PyTorch, Keras, TensorFlow, Pandas, scikit-learn, CUDA, Matplotlib, React (ES6), Django, Android, Git, JUnit, Docker NLTK, Robot Operating System (ROS), Linux, Shell.
- **Databases:** MongoDB, PostgreSQL.
- **Core Competencies:** Predictive modeling, time-series forecasting, data pipelines, data annotation, feature engineering, computer vision, model evaluation, cross-validation, Agile development, excellent communication.

WORK EXPERIENCE

Research Assistant (Machine Learning Researcher)

January 2024 – Present

University of Alberta: Department of Medicine, Edmonton, AB

- Leading an **independent research project** under faculty supervision to evaluate time-series forecasting models to predict blood-glucose trajectories using medical data.
- Implemented multiple predictive algorithms including LSTM, Temporal Fusion Transformer, and gradient-boosted ensembles, improving forecasting accuracy by **34%** over the naive model.
- Performing feature engineering to enhance model performance and implementing reproducible ML.
- Improve model and clinical performance using insights from up-to-date ML and health-informatics literature.
- Presented **first-author** findings at **EASD 2025** (Vienna) and currently co-authoring a manuscript for a journal.

Frontend Developer

September 2022 – December 2022

Zero RampUp, Edmonton, AB

- Developed and deployed a **React**-based business website with real-time API data updates.
- Created custom React Hooks to streamline asynchronous data retrieval, improving load times by **50%**.
- Worked in an Agile development team of **7**, participating in sprint planning, code reviews, and stand-ups.

Intern

July 2018 – August 2018

University of Alberta: Department of Computing Science, Edmonton, AB

- Optimized a **C-based** Hex game simulation program through algorithmic refactoring and code profiling.
- Presented results to an audience of **30+** peers and faculty, demonstrating improved program performance.

PRESENTATIONS

Invited Presentations

- Alzebedeh L, Lam A, Zhang J, Greiner. Forecasting long-range blood glucose in hospitalised type 2 diabetes patients: a comparative study of predictive modelling techniques. **European Association for the Study of Diabetes (EASD)**; Austria, Vienna. September 2025 — **14,000+** international conference attendees.
- Alzebedeh L, Lin C. Glucose Prediction and Automated Insulin Dosing in Hospitals. Endocrinology division, University of Alberta; Edmonton AB. April 2024.

PROJECTS

Autonomous Robot Driving Using ROS | *Python, ROS, OpenCV, TensorFlow* February 2023 – April 2023

ROS Developer, [Project Link](#)

- Built ROS navigation packages in Linux enabling autonomous vehicle control and object avoidance using computer vision.
- Trained a TensorFlow Detectron2 model on manually annotated images and deployed it using Docker.

NLP-Based Relation Extraction & Classification | *Python, NLTK, pandas* November 2023 – January 2024

NLP Developer, [Project Link](#)

- Optimized a Naive Bayes classifier to extract and categorize semantic relationships from FewRel dataset, achieving **90%** accuracy through cross-validation and text preprocessing optimization.

ML to Predict Edmonton's Weather | *Python, Matplotlib, NumPy, TensorFlow* March 2023 – April 2023

Machine Learning Developer, [Project Link](#)

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

Distributed Social Networking Web App | *Python, Django, React* January 2023 – April 2023

Django Backend Developer, [Project Link](#)

- Built backend architecture and API integration for a distributed social networking web application in **Django**.
- Collaborated with a **5-member** team to aggregate cross-server activity and conduct **unit testing** for reliability.