

LEPENG ZHOU

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Education

Bachelor of Science, Honors in Computing Science (Expected June 2023)

University of Alberta, Edmonton, Alberta

Skills

Programming and software: Python (with APIs), R, SQL, C, Java, MATLAB, Android Studio, Azure, Tableau, Google Colab, Spark, Power BI

Data Science/Analytics: Machine learning, Reinforcement learning, Deep learning architecture (GANs, LSTM, Transformer), data preprocessing, PyTorch, TensorFlow, numpy, data analysis and visualization tools in R.

Statistic concepts: F-statistic, T-statistic, residuals, intervals, hypothesis testing, indicator variables, etc.

Projects

Machine learning on MNIST Dataset: Developed a model to classify and generate handwritten digits using CNN, VAE and GANs, resulting in a 98% accuracy and 70% people interviewed believe that it's not machine generated.

Data Analysis & Visualization: Analyzed popular datasets like Boston housing, Cars, and Iris in R, applied regressions, and visualized results, grades received on these projects are all greater than 95/100.

Reinforcement Learning Agent: Trained an agent to solve mazes and land a spacecraft on the moon in a simulated environment, achieving 0% of hard coding and the entire training is on cloud in less than 20 minutes.

Natural Language Processing: Utilized NLTK package for sentiment analysis, topic modeling, and text classification, achieving an 85% accuracy rate in sentiment prediction.

Computer Vision: Implemented OpenCV for tracking, object detection with YOLO, and 2D to 3D point cloud reconstruction, deviance from the ground truth is less than 15%.

Android Data Logger App: Co-developed an Android app for logging, sharing, and saving data to the cloud, customer(professor and TAs) satisfaction rate is 9/10.

Work Experience

Residence Assistant

University of Alberta (Aug to Oct 2022)

Assisted first-year students with move-in, improving their transition experience by providing guidance and support.

Awards

Dean's Honor Roll 2021-2022, Faculty of Science

Certificates

CPR/AED/First Aid Certificate (Expires July 2025)