

KAYLEE MARQUEZ

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EDUCATION

The University of Texas at Austin, Austin, TX 08/2020 – 12/2024

Bachelor of Science in Computer Science, Minor in Korean

GPA: 3.88, 5x University Honors

Relevant Coursework: Principles of Machine Learning, Computer Vision, Data Structures, Operating Systems, Linear Algebra, Probability, Multivariable Calculus

EXPERIENCE

Amazon Web Services, Seattle, WA 05/2023 – Present

Solutions Architect Intern

- Create a digital twin for wind turbines using AWS based on data generated by virtual IoT sensors, and detect anomalous sensor data using the random cut forest algorithm

The University of Texas at Austin, Austin, TX 01/2023 – 05/2023

CS 312 (Intro to Programming) Teaching Assistant

- Lead weekly discussion sections, assist with lecture activities, host biweekly help hours, answer questions on the class Piazza forum, and grade assignments

H-E-B, San Antonio, TX 05/2022 – 07/2022

Data Infrastructure Intern

- Query data about on-prem MySQL servers' resource utilization from the performance monitoring application New Relic, and use Holt-Winters forecasting to provide capacity planning predictions and alerts to database administrators

Developmental Intelligence Lab, Austin, TX 09/2021 – 12/2022

Undergraduate Research Assistant

- Train YOLOv4 and detectron2 object detection models to detect custom classes in video data
- Debug and rewrite Python/FFMPEG scripts used for video and audio processing

SKILLS AND ABILITIES

Programming: Java, Python (NumPy, Pandas, OpenCV, PyTorch, TensorFlow), MATLAB, C, SQL

Technical: Machine Learning (Computer Vision, Deep Learning, Time Series Forecasting), AWS (boto3, CDK), Git, Unreal Engine 4, Performance Monitoring (Datadog, New Relic)

PERSONAL PROJECTS

K-Nearest Neighbors Image Classifier

- Classify images in the CIFAR-10 dataset into their 10 respective classes using the k-nearest neighbors algorithm

Austin Housing Price Predictor

- Build and train a neural network using TensorFlow that predicts the price of houses in Austin, Texas based on 13 different features

CAMPUS INVOLVEMENT

IEEE Robotics and Automation Society – RoboMaster 10/2022 – Present

Computer Vision Team Member

- Perform data augmentation on training images to increase the training dataset size for a YOLOv5 object detection model
- Use Kalman filters to predict robots' future locations based on historical movement patterns

Women in STEM (WiSTEM) 01/2022 – Present

Peer Mentor

Q++ 09/2021 – Present

Member