Cassandra Garza

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EDUCATION

The University of Texas Rio Grande Valley   Expected Grad: May 2025
Bachelor of Science in Computer Science, Bachelor of Science in Statistical Mathematics | 3.70 GPA

Cornell University, *online certificate in Machine Learning Foundations*   Aug 2023

EXPERIENCE

Mickey Leland Energy Fellow, U.S. Department of Energy   **Jun 2024 - Aug 2024**

Developing an automated tool for detecting and extracting text and tables from documents. Text is extracted using NLP, and tables are detected using YOLO and are then converted into CSV files with Google AI Studio. Gained expertise in integrating machine learning models, cloud services, and scripting workflows in Python.

Undergraduate Research Assistant, UTRGV   **Jan 2024 - Present**

Currently collaborating on researching alternative methods to improve pattern identification capabilities for Self-Supervised Learning models, aiming to reveal valuable transformable knowledge between datasets.

AI Student Fellow, Break Through Tech   **May 2023 - Apr 2024**

Explored the machine learning lifecycle, data preparation, and models such as KNN, logistic regression, ensemble methods, and more. Led student team in conducting a case study on implementing a neural network for sentiment analysis in chatbots. Provided recommendations for streamlining intent classification, improving accuracy, and enhancing the user experience. Engaged in a Kaggle competition with the New York Botanical Garden, training a model for precise classification of plant and animal specimen leveraging pre-trained models and computer vision techniques.

Data Management Intern, Compass Rose Public Schools   **Mar 2022 - Apr 2023**

Explored the machine learning lifecycle, data preparation, and models such as KNN, logistic regression, ensemble methods, and more. Led student team in conducting a case study on implementing a neural network for sentiment analysis in chatbots. Provided recommendations for streamlining intent classification, improving accuracy, and enhancing the user experience. Engaged in a Kaggle competition with the New York Botanical Garden, training a model for precise classification of plant and animal specimen leveraging pre-trained models and computer vision techniques.

COMMUNITY

President, Frontera Devs   **Oct 2021 - Present**

Planning and executing events to bridge gaps for our low-income, Hispanic developer community, grew membership from 300 to 700+ on discord. Leading technical workshops on the latest technologies, hosting mentorship programs at the university and high school levels, panels, and an annual Hackathon to which 150+ individuals attended last year at no cost to participants.

PROJECTS

Time-Symbolic Histogram Consistency Self-Supervised Learning for Time Series

Developed and implemented a novel adaptation to the Time-Frequency Consistency (TFC) framework, focusing on symbolic representations, to enhance self-supervised contrastive learning for time series data. Introduced innovative modifications to the contrastive time loss and symbolic consistency loss, resulting in a comprehensive framework capable of capturing intricate symbolic patterns.

Dictionary Sampling

Developed and executed a comprehensive project in my sampling course, leveraging R to experiment with diverse sampling methods. Explored the pros and cons of each method through the unique approach of sampling pages from a dictionary, aiming to estimate the percentage of the entire dictionary known.

Clustering and Visualizing Enrollment

Conducted data-driven exploration of Computer Science students' academic pathways, employing clustering and visualization techniques. Leveraged a KNN model on a subset of data, achieving an accuracy of 79%, uncovering insights into the influence of similar academic journeys on degree completion at my university.

Transform Intent Engineering Through AI Chatbots, Farmers Insurance

Lead project team to integrate AI chatbots into Farmers' existing programs to identify the context of customer questions to help with chat routing flow. Streamlined intent classification, improved accuracy, and enhanced user experience by leveraging AI and natural language.

SKILLS

Technical: <u>Advanced:</u> Python, C++, Tableau, Figma <u>Intermediate:</u> SQL, R <u>Beginner:</u> HTML/CSS, JavaScript
Interdisciplinary: Project Management, Collaborative Leadership, Developer Advocacy, Public Speaking
Relevant Coursework: Intro to Data Science, Database Design, Machine Learning, Python OOP, Data Structures & Algorithms

Hobbies/Interests: Taekwondo, Travel, Cooking, Photography, Gym, Roblox, Karaoke