# Yuxi Zheng

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## EDUCATION

**Emory University**          **Master of Science, Computer Science**          **Atlanta | 2023.09 – 2025.06**

GPA：3.67/4.0          Merit-based Scholarship, 2023-2025

Related courses: System Programming, Natural Language Processing, Machine Learning.

**Renmin University of China**          **Bachelor of Science, Statistics**          **Beijing | 2019.09 – 2023.06**

GPA：3.7/4.0          Scholarship of Academic Excellence, 2019-2021          Scholarship for International Program, 2022

Related courses: Data Structure, Algorithms, Data Science, Databases, Probability, Regression, Optimization.

**University of Edinburgh**          **Visiting Student**          **Edinburgh | 2022.01 – 2022.05**

## PROJECT EXPERIENCE

### IOS App Development Neword ([link](#))

○ Created Neword, an interactive tool with memory card and spelling features for vocabulary memorization.

○ Designed the user interface and constructed data structure for word list and dictionary.

○ Used SwiftUI framework to implement feature functions, conducted product testing and uploaded to App Store.

### System Archiving Program

○ Constructed archiving program from scratch to manage file libraries in Unix and Unix-like operating system.

○ Implemented system calls to implement key features including archive creation, listing, modification, and file extraction by interacting with directory and system data structures.

### Kaggle Multimodal Single-Cell Integration Competition Silver Medal Team (5%)

○ Built models to predict gene expression given chromatin accessibility and predict protein levels given gene expression based on high dimensional chromatin data from selective patients.

○ Used truncated SVD to conduct dimension reduction on the chromatin accessibility data, trained the DNN model with Optuna for tuning, trained the LightGBM model and ensembled results.

### Hidden Markov Model for part-of-speech tagging

○ Used labelled sentences in Brown corpus to approximate the frequency distribution for words and POS tags.

○ Constructed Emission and Transition models for word-to-word and word-to-POS probability distribution.

Used the Viterbi algorithm to predict the word class annotation given the sentence.

## RESEARCH EXPERIENCE

### Predicting Economic Development Using Deep Learning

**Beijing | 2021.10 – 2022.01**

Computer Vision Group at Renmin University/Research Assistant

○ Participated in constructing VGG model for extracting high-dimensional feature vectors from remote sensing images, providing cluster information for economic development.

○ Participated in constructing ResNet18 model for predicting economic development level through remote sensing images.

## SKILLS

○ **Language:** Chinese(native), English(fluent).

○ **Programming and Software**: Python, C#, C++, Swift, SQL, R, MATLAB.