

# Bryant McArthur

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## Education

### Master of Computer Science

April 2025

Texas A&M University

College Station, Texas

- GPA: 3.67/4.00
- Data Mining and Analysis
- Reinforcement Learning
- GRE: 324
- Artificial Intelligence
- Algorithms & Optimization
- Machine Learning Engineering
- Distributed Systems & Cloud Computing
- Software Engineering

### BS, Applied & Computational Mathematics Emphasis (ACME)

April 2023

Brigham Young University

Provo, Utah

- GPA: 3.93/4.00
- Full Academic Scholarship
- Bayesian Statistics
- ACT: 35
- Machine Translation
- Time Series Forecasting
- Concentration: Linguistics
- Natural Language Processing
- Mathematical Theory

## Experience

### Head of Machine Learning

May 2022 – Present

Addavox

Lehi, Utah

- Developed, Customized and Trained Model for Voice Synthesis Retaining Vocal Qualities of Encoded Speech
- Engineered “Lip Sync” Model for Synchronizing Vocal Audio to Visual Mouth Movements in High-Dim Space

### Lead Consultant | Founding Partner

January 2022 – Present

Parsha Works

Provo, Utah

- Deployed Full-Stack Event Ticketing Software MVP for \$50,000 in Three Months
- Built Software for Automated, Customized, and Timely Real Estate Leads

### Sales Rep Team Lead

April 2020 – September 2021

Moxie Services

Dallas, Texas

- Led the Company Nationwide Consistently in Individual Sales Door-to-Door on a Day-to-Day Basis
- Generated and Responsible for over \$1 Million in Revenue for Moxie

## Skills

- Python, R, Ruby, C++, html
- Data Structures
- Statistics
- Numerical Linear Algebra
- Pytorch, Tensorflow, Cuda
- Unix Shell
- Multivariable Calculus
- ODEs, PDEs
- Gradient Descent
- Linear and Nonlinear Analysis
- Singular Value Decomposition
- Fourier Analysis, Kalman Filter

## Relevant Projects

### Low Rank Adaptation

December 2023

- Finetuned Stable Diffusion Model to Generate Custom Pokemon Using Low-Rank Adaptation (LoRA)

### Wildfire Predictions

April 2023

- Analyzed Wildfire Data Using ARIMA, HMM, Kalman Filter, and Prophet Models
- Accurately Predicted When and Where the Next Wildfires will Strike on a Regional Basis

### Multilingual Neural Machine Translation Model

March 2022

- Cleaned and Multi-way Aligned Data to Train a Complete MNMT System for Polish, Spanish, Czech, English
- Analyzed Bleu Scores with Corresponding Bilingual Models on Untrained Language Pairs

### Speech to Speech Translation Model

February 2022

- Created Pipeline using Automatic Speech Recognition, Text to Text Machine Translation and Foreign Language Speech Synthesizer Models to Recognize Audio input and Output Translated Foreign Speech

## Volunteer Work

### Club Officer

January 2024 – President

Texas A&M Men's Soccer

College Station, Texas

- Elected DK Coordinator after Leading the B-Team my First Season and Advancing to A-Team for Regionals

### Full-Time Volunteer Representative & Assistant to the President

January 2018 – February 2020

The Church of Jesus Christ of Latter-day Saints

Warsaw, Poland

- Analyzed Statistics and Led Weekly Trainings to Achieve Group Improvement Goals for Entire Mission