

# Bryant McArthur

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## Education

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### Master of Computer Science

December 2024

Texas A&M University

College Station, Texas

- GPA: 3.86/4.00
  - Data Mining and Analysis
- Deep Learning, AI & RL  
Algorithms & Optimization  
Machine Learning Engineering  
Distributed Systems & Cloud Computing

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

April 2023

Brigham Young University

Provo, Utah

- GPA: 3.93/4.00
- Concentration: Linguistics  
Machine Translation & NLP
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## Experience

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### Machine Learning Engineer

June 2024 – August 2024

Ditto

Orem, Utah

- Designed Cross-Lingual Prosody Mapping Text-To-Speech Model with Speaker Voice Cloning

### Director of Machine Learning

May 2022 – January 2024

Addavox

Lehi, Utah

- Developed, Customized and Trained TTS 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 | CFO

January 2022 – October 2024

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
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## Skills

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- Python, R, Ruby, C++, html
  - AWS
  - Data Structures
  - Numerical Linear Algebra
  - Pytorch, Tensorflow, Cuda
  - Statistics
  - Multivariable Calculus
  - ODEs, PDEs
  - Gradient Descent & Optimization Methods
  - Linear and Nonlinear Analysis
  - Singular Value Decomposition
  - Fourier Analysis, Kalman Filter
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## Publications and Projects

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### WACV 2025 Workshop: AI for Multimedia Forensics and Disinformation Detection

February 28, 2025

- “HFMF: Hierarchical Fusion Meets Multi-Stream Models for Deepfake Detection”

### 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
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## Volunteer Work

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### Club Officer

January 2024 – December 2024

Texas A&M Men's Soccer

College Station, Texas

- As Elected DK Coordinator: Manage Alumni Fundraising Events, Allocate Financials, Play and Compete with Team

### 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