

BENJAMIN (BEN) MA

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EDUCATION

TSINGHUA UNIVERSITY, SCHWARZMAN COLLEGE

Beijing, China

Master of Management Science, Global Affairs

2022

- Guffey Family Fellow in Schwarzman Scholars, a one-year master's degree and leadership program founded by Steve Schwarzman, CEO and co-founder of Blackstone Group
- Conducted automated collection, feature extraction, and correlational analysis of top Chinese and Western popular music, and interviewed music industry insiders, to investigate cross-cultural pop music exchange

UNIVERSITY OF SOUTHERN CALIFORNIA

Los Angeles, CA

M.S., Computer Science | B.S., Computer Science | Minor, Music Production

2021

- Graduated Summa Cum Laude with Discovery Scholar distinction for Outstanding Research
- USC Viterbi Engineering Fellowship recipient (top 5% of USC engineering students)
- Studied music production and music industry in Thornton School of Music and Free Artists Matchmakers

EXPERIENCE

AMAZON ALEXA, INC.

Cambridge, MA

Software Development Engineer

2022

- Managed engineering group responsible for Blitz Hand-Authoring, an Alexa-internal tool for language engineers to create natural language rules guiding Alexa voice interactions
- Designed system architecture and component interaction model for Blitz Hand-Authoring, including API contracts, NoSQL data storage, AWS Lambda execution environment, and React/Redux front-end
- Iteratively created Blitz Hand-Authoring front-end UI via hand-crafted Balsamiq wireframes, integrating continuous feedback from Alexa language engineers and localization specialists in the U.S., Europe, and India
- Performed investigation & audit of high-severity service outage using AWS Cloudwatch metrics, logs, and post-mortem interviews. Proposed and owned operational excellence initiative to prevent future outages by adding preemptive metric-based alarms, creating high-fidelity test data, and writing an operational runbook

DEEP MUSIC, INC.

Beijing, China

AI Research Scientist Intern

2022

- Designed and built transformer model for simultaneous musical generation of melody and lyrics
- Adapted mT5 multi-lingual text transformer architecture with custom tokens, callbacks, and loss function to support generation of both text and musical notes
- Experimented with different transformations and representation formats for in-house music dataset, and wrote Python scripts to efficiently convert between dense and sparse MIDI representations

USC SIGNAL ANALYSIS & INTERPRETATION LAB (SAIL)

Los Angeles, CA

Researcher

2017 – 2021

- Led SAIL's music research group investigating characteristic music of major film genres, leading to publication in PLoS ONE, peer-reviewed journal of the Public Library of Science
- Built multivariate classical and deep machine learning models to forecast human responses to music
- Authored or co-authored five research publications, and presented original work internationally
- Achieved top-of-leaderboard and received Distinctive Mention at 2020 MediaEval Emotions & Themes in Music Challenge for the task of building a model to recognize emotion tags for musical clips

ADDITIONAL INFORMATION

- Founder of DJ Lysosome, interactive music production video channel and mobile event DJ service
- Captain, Schwarzman College and USC Ultimate Frisbee Clubs