CHARLES FOSTER

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EDUCATION

@ Stanford University — *M.A. in Music, Science, and Technology*, 2018–Present

- Program integrating music perception, digital signal processing, and interaction design.
- VR/AR researcher in the Music, Computing, and Design (MCD) group. GPA: 4.17

@ Stanford University — *B.S. in Symbolic Systems*, 2014–2018

- Cognitive science program drawing on computer science, psychology, and linguistics.
- Concentration in computer music under Prof. Jonathan Berger. GPA: 3.91

EXPERIENCE

@ Center for Professional Development — *Studio Operator*, May–August 2018

- Coordinated control room operations for audio-video capture of lecture sessions.
- Supervised routing and integration of instructor devices with room DSP and display systems.

@ Warner Music Group — *Innovation Fellow*, June–August 2017

- Initiated in-house projects for data-driven fan engagement, including automated discovery of influencers, social media targeting, and new strategies to drive playlist listens.
- Built tools for automatic extraction, aggregation, and analysis of social media KPIs.

@ Computation and Cognition Lab — *Research Assistant*, Jan.–June. 2017

- Mined and managed large text corpora for linguistic patterns for natural language understanding.
- Developed, programmed, and deployed experiments on Amazon Mechanical Turk.

@ Lab41 — *Software Engineering Intern*, June–Sept. 2016

- Contributed to an open-source deep learning project called Attalos, focused on training deep networks to map multimodal data into a single vector space.
- Conducted research on prediction metrics and new approaches to image tagging.

WORK

Design

- Sound and interaction design portfolio available on my webpage. https://stanford.io/2yo0yYG

Publications

- Tessler, M.H., Degen, J., Foster, C.J., Hall-Watley, C., and Goodman, N.D. People are strange: Investigating naturally occurring generics. *LSA 2018*, Salt Lake City, Jan 4-7.
- Ni, K., Zaragoza, K., Foster, C., Carrano, C., Chen, B., Tesfaye, Y., & Gude, A. Sampled Image Tagging and Retrieval Methods on User Generated Content. *Proceedings of the 2017 British Machine Vision Conference*.

Other Research

- Computational analysis of creaky voice. https://stanford.io/2MDKew2
- Psychoacoustics and perception research. https://bit.ly/2J4PQu6
- Computer vision research replication. https://bit.ly/2bptdBh
- Analysis of interaction data from Smule's *Sing!* app. https://bit.ly/293CDAP

Leadership

- Internal Relations (2018) and Tuba Section Leader (2017), *LSJUMB.*

SKILLS

- Sound and interaction design, research, data science, technical writing, and audio-video systems.
- Proficient in Python, Javascript, ChucK, and Faust. Experience with MATLAB, C++, C#, and C.
- Developed with Max/MSP, Unity, OpenFrameworks, Processing, and TensorFlow.