danielfox@thoughtstoodefinite.com 484-553-765	Daniel Fox	565 Prospect Place APT 4E Brooklyn, NY 11238

SUMMARY

I have a rare combination of two PhDs in mathematics and music with 25 years of hands-on experience in innovative academic research, teaching, and music performance. My data science skills include deep neural networks, machine learning, and cloud computing. I have a strong record of leadership and productive collaboration through research, project management, teaching, and public speaking. My exceptional writing skills are demonstrated through publications in peer reviewed academic journals and music criticism in widely read arts magazines. I seek opportunities to work with companies at the forefront of synthesizing big data and music.

ACCOMPLISHMENTS

Mathematics Research
- 6 publications & 4 conference presentations in mathematics and theoretical physics
- Innovated new connections between integrable systems and differential geometry

Music Research
- 1 peer reviewed publication, 7 international conference presentations on music research
- Music and art criticism in *Hyperallergic* and *Van Magazine*

Data Analytics (**Consulting**)
- Developed KPIs for marketing materials
- Wrangled five years of messy data into a uniform format used for actionable queries
- Created data curiosity

Compositions Performed by JACK Quartet, Mivos Quartet, Talea Ensemble
- Innovated new performance techniques

Concert Production
- Managed teams to produce concerts at NYC music venues
- Negotiated visions and requirements of multiple stakeholders
- Managed the production and submission of time-sensitive materials

TECHNICAL AND RESEARCH SKILLS

- ❖ Modeling and scraping in *Python* with *TensorFlow 2, pandas*, *NumPy*, *matplotlib*, *scikit-learn, gensim, streamlit*
- ❖ Cloud computing on AWS, Azure, and Google Cloud Platform
- ❖ Experience using deep neural networks and machine learning algorithms
- ❖ Advanced mathematics (differential geometry, Lie algebras, partial differential equations)
- ❖ Audio Editing, Mixing, and Synthesis: *Reaper, ProTools, Audacity, Pure Data*
- ❖ Designing and conducting interview-based human subject research

SELECTED PROFESSIONAL EXPERIENCE

Data Analytics Consulting for *Art Walks Art Talks* & *Think Through Art*	2019-20
Assistant Professor of Mathematics, Community College of Philadelphia	2011-14
Visiting Assistant Professor, University of California, Irvine	2005-08
National Science Foundation International Research Fellowship at Oxford University	2006-09

EDUCATION

Ph.D. Music Composition, The Graduate Center, City University of New York	Expected 2020
Ph.D. Mathematics, Duke University	2005
B.A. Mathematics and Physics, Hampshire College	2000