

# WILLIAM DeSHONG

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## EDUCATION

**PhD, Modeling and Simulation**, Old Dominion University, Norfolk, VA  
**Master of Science, Statistics**, Virginia Tech, Blacksburg, VA  
**Bachelor of Science, Statistics**, cum laude, Virginia Tech, Blacksburg, VA  
**Bachelor of Science, Psychology**, cum laude, Virginia Tech, Blacksburg, VA

August 2025-Present  
December 2015  
May 2014  
May 2014

## WORK EXPERIENCE

### Nielsen

#### Senior AI/Machine Learning Engineer II - Audience Measurement Methods

October 2022 - December 2025

- Leads the TV strategic research projects team which consists of 2 Senior Data Scientists and 1 Lead Data Scientist
- Data Science lead for developing, testing, deploying and maintaining 3 methodologies for Audience Measurement
  - Products: Out of Home; Non-connected devices (mobile/tablet); NFL Superbowl custom study
  - Impact: New measurement and reporting capabilities; over \$5 million of incremental yearly revenue
- Received 3 US patents on weighting methodology enhancements implemented by Nielsen
- Responded to 100+ EY methodology audit requests yearly that were used to support product accreditation
- Software used: SQL, Python, Databricks/Apache Spark, R

#### Lead Data Scientist - Core Television Audience Measurement Methods

August 2021 - October 2022

- Designed and built the Out of Home Television measurement weighting methodology in Python
- Built the data pipeline used to automate daily weights calculation

#### Senior Data Scientist (Product Owner) - Digital Audience Measurement

January 2016 - September 2019

- Evaluated performance of third party eye tracking and facial recognition technology
- Individualization Machine Learning Algorithm
- Tagged Impression DMA Assignment
- Non-Probability Sample Weighting process enhancements
- Panel Size Recommendations

### City of Baltimore Office of Performance and Innovation

#### Data Fellows Program Manager

October 2019- June 2021

- Technical Accomplishments
  - Created a data simulation in Python used to guide the strategy for reducing Department of Public Works cleaning backlog from 14,000 to 0 in 4 months
  - Built and maintained 3 data collection and analysis systems for COVID19 response
  - Consulted for multiple ad hoc projects across city departments
  - Software used: Python, R, SQL, PowerBI, Excel
- Managerial/Administrative
  - Developed the structure and built the Data Fellows program from the ground up
  - Built recruitment process, created and filled 6 new Data Fellows positions
    - Directly managed 2 Data Fellows, matrix managed 6 additional Data Fellows
  - Presented data analysis weekly to Mayor Brandon Scott, Deputy Mayors, City Administrator and various agency heads

## SKILLS

**Software:** Unity; Blender; Python (Scikit-Learn, PyTorch, TensorFlow, Keras, Numpy, Pandas, Plotly, Seaborn); MySQL; Databricks/Apache Spark; C++; R (ggplot2, tidyverse); Git; PowerBI; ARM Assembly Language, JIRA;

**Key Skills:** Virtual Reality Development; Probabilistic Simulations; Machine Learning; Process Improvement; Data Visualization; Statistical Communication; Project Management; Bias Correction