James Thomas Wang

(925) 353-8098 | james@jtw.is | www.jtw.is | U.S. Citizen

Interdisciplinary Projects

The Silver List   Jul. 2020 - Present
Senior Thesis, Advised by Professors Joseph Kadane & David Oresick

Featured in Vanity Fair, Artnet News, and Pittsburgh Tribune-Review

Surveying 500 fine-art photography curators, scholars, publishers, and critics to identify and support emerging, diverse artists

Publishing list of 47 most-recommended artists

Analyzing demographic data of respondents and artists

Collaborating with Silver Eye Center for Photography and The Black List

Received SURG and Crosswalk research grants

View at to.jtw.is/silverlist

Novel Deep Learning Art Collection Analysis   Oct. - Dec. 2020
Large-scale Social Phenomena (PhD) Class Project

Developed novel deep learning image-embedding-clustering methodology for large-scale analysis of visual art collections

Analyzed the Metropolitan Museum of Art's photography collection

View at to.jtw.is/metcollection

"Approximate Equivalents"   Jan. - May 2020
Independent Study Project, Advised by Professor David Oresick

Built ML model that creates photos in the style of late photographer Alfred Stieglitz, from Google Street View panoramas

Published book of model outputs with Silver Eye Center for Photography

View at to.jtw.is/equivalents

Autonomous Camera Operator   Sep. 2017 - Feb. 2018

Fabricated and developed subject-following camera operator robot with team for HackCMU 2017 hackathon

Won HackCMU 2017 and CMU 50th Anniversary Student Exhibition

Invited to present project to CMU Board of Trustees in San Francisco

Work Experience

Amador Bioscience, Pleasanton, CA   May 2020 - Present
Data Science Intern

Analyzing clinical efficacy of breakthrough first-in-class cancer therapy for Gilead Sciences

Implementing novel machine learning feature-importance analysis to evaluate potential response predictors

Conducting stochastic simulations to project trial outcomes for key clinical development decision-making

PNC, Intelligent Automation, Pittsburgh, PA   May - Aug. 2019
Machine Learning & Data Science Intern

Led independent team to create PNC's first machine learning project

Created premature mortgage payoff prediction model with double the forecast range of the state-of-the-art commercially-available model

Estimated to generate $1.6 million in annual revenue

Baidu, Big Data Lab, Beijing, CN   Jun. - Aug. 2018
Deep Learning Research Intern

Developed library for function-preserving neural network morphisms in Tensorflow to accelerate architecture search by over 30x

Education

Carnegie Mellon University, Pittsburgh, PA
Aug. 2017 - May 2021, 3.47 GPA

B.S. in Statistics & Machine Learning
Minor in Photography

Dietrich Quantitative Social Sciences Scholar

Coursework

Introduction to Machine Learning (PhD)

Intermediate Deep Learning (Masters)

Large-scale Social Phenomena (PhD)

Statistical Computing (Masters)

Advanced Methods of Data Analysis

Modern Regression

Statistical Graphics & Visualization

Data Science Skills

Statistical Computation
  Python, R

Machine Learning Model Development
  PyTorch, Tensorflow, scikit-learn

Data Visualization
  ggplot2, Plotly, Matplotlib

Interactive Data App Development
  Streamlit, Shiny, Jupyter

Data Processing
  dplyr, pandas, NumPy

Big Data
  Hadoop MapReduce, Apache Spark

Visual Art Skills

Film Photography and Development
  35mm, Medium-Format, Large-Format

Digital Photography and Cinematography
  Blackmagic Pocket Cinema Camera

Photo Editing, Sequencing, Printing
  Lightroom, Photoshop, Illustrator, InDesign, Premiere Pro, Lumetri

Web Development
  Webflow, Jekyll, HTML, CSS, Javascript