

James Thomas Wang

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Work Experience

Amador Bioscience, Pleasanton, CA

May 2020 - Present

Data Science Intern

- Analyzing efficacy data of investigative drug in cancer patients
- Performing machine learning feature importance analysis of human trial data
- Conducting stochastic simulations to project trial outcomes

PNC, Intelligent Automation, Pittsburgh, PA

May - August 2019

Machine Learning & Data Science Intern

- Led independent intern team to develop PNC's first large-scale machine learning project from scratch
- Built model to predict premature mortgage payoffs with double the lookahead of the current state-of-the-art model for targeted marketing
- Estimated to generate \$1.6 million additional revenue annually

Baidu, Big Data Lab, Beijing, CN

June - August 2018

Deep Learning Research Intern

- Researched neural network architecture search methodologies with team
- Developed a Python library for function-preserving neural network architecture morphisms in Tensorflow
- Library accelerates architecture search training by over 30x

Machine Learning Projects

Machine Photographer Project

January - May 2020

Independent Study Project Advised by Professor David Oresick

- Built machine learning model to compose photographs from Google Street View in the style of late photographer Alfred Stieglitz
- Printed limited series art book from model outputs
- Explored questions of authorship, artistic expertise, and value of digital media

Song Year Recognition Research

February - May 2019

Introduction to Machine Learning (PhD) Class Project

- Researched classifying songs by year of creation with Spotify timbre data
- Created novel model variant that outperforms all other 7 models tested
- Presented results in public poster session and wrote paper explaining process

Autonomous Camera Operator

September 2017 - February 2018

- Built camera operator robot with team that tracks and follows subject with machine-learning-based face recognition for HackCMU 2017
- Won the Best Use of Machine Learning award presented by Google
- Won first place in the "I Built Something" category of the CMU 50th Anniversary Student Exhibition
- Invited to present project to the CMU Board of Trustees in San Francisco

Honors

- February 2018 Invited Student Presenter, CMU Board of Trustees, San Francisco
- November 2017 Winner, "I Built Something" Category, CMU 50th Anniversary Student Exhibition
- September 2017 Best Use of Machine Learning, Presented by Google, HackCMU 2017
- August 2017 Quantitative Social Sciences Scholar, Carnegie Mellon University
- March 2017 National Merit Scholarship Winner, National Merit Scholarship Corporation

Education

**Carnegie Mellon University,
Pittsburgh, PA**

August 2017 - May 2021

Statistics & Machine Learning
Undergraduate Major
Photography Minor

Skills

- Python, Tensorflow, scikit-learn, R, dplyr, ggplot2, Plotly, Shiny
- Hadoop, Apache Spark, DataRobot, LaTeX
- C, SML, Java, Swift
- Photoshop, Lightroom, Illustrator, InDesign, Premiere Pro, Solidworks

Coursework

- Introduction to Machine Learning (PhD)
- Intermediate Deep Learning (Masters)
- Modern Regression
- Advanced Data Analysis
- Algorithms and Advanced Data Structures (Masters)
- Statistical Graphics and Visualization
- Great Theoretical Ideas in Computer Science
- Introduction to Computer Systems