Michael H. Stanley

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Education

New York University — **New York, NY**
M.S., Center for Data Science — May 2021
GPA: 4.0/4.0

- Courses: Geometric Modeling, Deep Learning, Machine Learning, Inference & Representation, Big Data
- GRE: 170V/170Q

Duke University — **Durham, NC**
B.S.E., Mechanical Engineering & Materials Science, Economics (double major) — 2003 – 2007
GPA: 3.97/4.0

- *Summa cum laude,* Graduation with Distinction (senior thesis), Phi Beta Kappa, Tau Beta Pi
- Duke Jazz Ensemble, Hoof 'n' Horn musical theater group, table tennis club team
- Duke alumni interviewer for potential, incoming undergraduates

Publications, Presentations, and Patents

Publications

- **Metrics for Aerial, Urban LiDAR Point Clouds.** Michael Stanley and Debra Laefer. [JoPRS] *ISPRS Journal of Photogrammetry and Remote Sensing, Vol. 175, May 2021, pp. 268-281, 2021.*
- **Bandit Modeling of Map Selection in Counter-Strike: Global Offensive.** Guido Petri*, Michael Stanley*, Alec Hon*, Alex Dong*, Peter Xenopoulos, Claudio Silva. [IJCAI AISA]. *Accepted for AI for Sports Analytics Workshop (AISA) at International Joint Conference on Artificial Intelligence (IJCAI), 2021.*

Presentations

- **Image Denoising with Generative Adversarial Networks**. Michael Stanley and Chuan Chen, 2020. [Slides] *NYU Center for Data Science Research Conference, December 11, 2020.*
- **Structured Modeling of LiDAR Point Clouds.** Michael Stanley, 2020. [Slides] *Machine Learning Symposium, November 11, 2020, hosted by Multiscale Machine Learning Sandbox.*

Patents

- **Systems and Methods for Visualizing Threats in Networked Control Systems**. Tim Holl, Michael Stanley, and Russell Bauder. [Patent] *U.S. Patent No. 10,348,758. Issued July 9, 2019.*

Research Experience

NYU Urban Modeling Group — **New York, NY**
Researcher — 2019-present

- Applying machine learning to aerial LiDAR point clouds. Focus on inverse problems (inpainting missing points), object detection (identifying vehicles for removal), and processing of raw, full waveform LiDAR data
- Predicting and quantifying density and accuracy for modern, multi-fight pass aerial LiDAR datasets
- Part of a multi-university NSF project: Machine Learning for Multi-Disciplinary, Multi-Scale Problems
- Advisor: Debra Laefer, *Professor of Urban Informatics, NYU Center for Urban Science and Progress*

Team Leader — 2020-present

- Advising 8 undergraduate researchers in projects related to machine learning and remote sensing in urban environments: object detection in LiDAR, generating artificial training data, learning curves for PointNet++

NYU Center for Data Science — **New York, NY**
Researcher — 2020-present

- Applying generative adversarial networks (GANs) and inverse techniques to denoise and extract 3D structure from 2D electron microscope images
- Studying the potential of adversarial loss to mitigate the shortfalls of the ubiquitous ℓ_2 loss in image processing (denoising, inpainting)
- Advisor: Carlos Fernandez-Granda, *Assistant Professor of Mathematics and Data Science*

Professional Experience

Enigma Technologies – *Data software and analytics company* **New York, NY**
Product Manager 2017 – 2019

- Launched and sold 3 new ML products: Linking Platform, Ontology Manager, and Personal Data Classifier
- Sold products to multiple Fortune 500 customers in financial services and pharmaceutical development
- Responsible for product roadmap, business development, user interface design, and demo design
- Contributor to model selection, data labeling process, ontology definition, recruiting, marketing
- Managed teams of 5-12 software engineers, data scientists, data engineers

Symantec Corporation – *International security software company* **Mountain View, CA**
Senior Product Manager – Embedded Systems Analytics 2014 – 2016

- Wrote 5-year connected vehicle cybersecurity plan for Big 3 automotive client to address cyber threats to advanced driver-assistance systems (ADAS), autonomous vehicles, and telematics components
- Launched 2 embedded security analytics products: Anomaly Detection for Industrial Control Systems and Anomaly Detection for Automotive
- Unsupervised anomaly detection software embedded directly into industrial and automotive systems
- Automotive product launched as #2 most effective in-vehicle security solution based on external testing
- Responsible for customer co-development partnerships, global salesforce education, user interface design

CIVC Partners – *Middle-market private equity firm with 15 employees and $1.3B under management* **Chicago, IL**
Associate – Business Services and Financial Services 2010 – 2013

- Participated in all phases of the private equity investment process: market and company financial forecasting, company and industry due diligence, developing KPIs for portfolio companies, debt structuring, deal sourcing, and intermediary relations

Bain & Company – *International management consulting firm* **Atlanta, GA**
Senior Associate Consultant 2007 – 2010

- Responsible for market analysis, financial modeling, senior client presentations, managing direct reports, and project direction

Academic Service

3DGeoInfo Conference – *International conference for researchers in 3D geoinformation* **New York, NY**
Organizing Committee, 2021 Conference 2020 – 2021

- Responsible for machine learning conference track and digital marketing and outreach

NYU Center for Data Science **New York, NY**
Section Leader: Probability and Statistics Fall 2020

- Graduate course for students in Data Science Master's program
- Led weekly recitations for ~15 students, prepared recitation and homework problems, held weekly office hours

Duke University Economics Department **Durham, NC**
Teaching Assistant: Portfolio Theory and Optimization Spring and Fall 2006

- Undergraduate elective for junior and senior economics majors
- Economics TA Award (highest rating in department by students)

Technical Skills

Languages: Python, Matlab, R, SQL, Excel
Tools & Libraries: PyTorch, Tensorflow, Scikit-Learn, CloudCompare, Laspy, GraphQL

Interests

Interests: CrossFit, running, table tennis, science fiction, college basketball, saxophone, coffee science, mixology