Eamonn Tweedy

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EDUCATION

UNIVERSITY OF CALIFORNIA, LOS ANGELES
Ph.D. in Mathematics
M.A. in Mathematics
2006-2011 | Cum. GPA: 3.848

NORTH CAROLINA STATE UNIVERSITY
B.S. in Applied Mathematics
B.S. in Physics
2002-2006 | Cum. GPA: 3.929

TECHNICAL SKILLS AND KNOWLEDGE

PROGRAMMING / SOFTWARE

Python, including packages:

- Pandas, NumPy, Statsmodels
- Scikit-learn, PyTorch, XGBoost
- Matplotlib, Seaborn, Plotly
- Natural Language Toolkit

PostgreSQL, MySQL
LaTeX, Git, Microsoft Office Suite

MATHEMATICS EXPERTISE

Calculus and differential equations
Linear algebra and abstract algebra
Geometry and topology
Graph theory and discrete math
Statistics and probability

DATA SCIENCE AND MACHINE LEARNING KNOWLEDGE

Machine learning models, including:

- Supervised and unsupervised learning: linear models, KNN, SVM, decision trees, clustering
- Ensemble methods: bagging, forests, boosting techniques
- Neural networks: FCNN, CNN, RNN, GAN,transformers, diffusion
- Time series forecasting models: ARIMA, Prophet, Neural Prophet, LSTMNN

Dimensionality reduction:
PCA, LDA, manifold learning
Data cleaning and feature engineering
Data exploration and visualization

EMPLOYMENT HISTORY

WIDENER UNIVERSITY | Chester, PA
Tenured Associate Professor of Mathematics | 2019 - present
Assistant Professor of Mathematics | 2014-2019

RICE UNIVERSITY | Houston, TX
G.C. Evans Post-doctoral Instructor | 2011-2014

TEACHING EXPERIENCE

- Developed and delivered a variety of advanced undergraduate and graduate mathematics courses including calculus (single- and multi-variable), differential equations, linear algebra, graph theory, discrete mathematics, and probability.
- Consistently earned outstanding ratings from students and peers.

RESEARCH EXPERIENCE

Produced original research in topology resulting in seven peer-reviewed academic articles published in national and international mathematics journals. Google scholar profile: 𝔊

COMMITTEE AND SERVICE WORK

Collaborated with colleagues on a wide variety of faculty governance committees. Most notably, chaired a University-wide faculty Technology and Instructional Resources Commitee (2019-2021).

SKILLS TRANSFERRABLE TO INDUSTRY SETTING

- Planning, coordinating, and executing individual and collaborative research projects in mathematics
- Self-directed learning of new topics and skills in order to solve problems
- Preparing effective technical presentations, and writing and editing technical manuscripts
- Lecturing, public speaking, and explaining complex topics and problems to a wide variety of audiences
- Facilitating productive discussion in a collaborative setting
- Supervising and evaluating the work of students and peers

PROFESSIONAL REFERENCES

Dr. Tom Goldstein, tomg@cs.umd.edu
Professor of Computer Science, University of Maryland

Dr. Shelly Harvey, shelly@rice.edu
Professor of Mathematics, Rice University

Dr. Neil Watling, nawatling@widener.edu
Associate Professor of Mathematics, Widener University