James Hubert Merrick

http://geal.ie

Professional Experience

Geal Research, Offaly, Ireland & San Francisco, California *February 2018–Present*

Data science research and consulting.

Commercial: Electric vehicle charging station siting (Stable Auto, San Francisco CA), electricity strategic planning (Bord na Móna, Ireland), machine fault prediction (Eastway Tech, Ireland).
Software development: MOS, software to automate deployment of optimization models.
Research: Solution of large-scale energy and economic optimization problems (EPRI, Palo Alto CA), ongoing research collaborations with colleagues at Stanford University.

Electric Power Research Institute (EPRI), Palo Alto, California *October 2010–June 2013*

Developed a large scale, state of the art, optimization model of U.S. electricity system, now a key analysis tool of national and regional energy and climate policy options. Experience extracting associated insights for stakeholders and decision makers.

IE Consulting Engineers, Carlow, Ireland *August 2006–August 2008*

Statistical and structural modeling of river flows to inform civil engineering design.

Agriculture, Offaly, Ireland *Ongoing*

Strategy and engineering design for family dairy farm business.

Education

Stanford University, Stanford, California *October 2013 - January 2018*

PhD in Management Science and Engineering
Thesis Title: Advancing Energy and Climate Planning Models: Optimization Methods, Variable Renewables and Smart Grids
Papers from dissertation published in economics, engineering and operations research journals.

Massachusetts Institute of Technology (MIT), Cambridge, Massachusetts *September 2008 - August 2010*

SM in Electrical Engineering and Computer Science
SM in Technology and Policy
Cumulative MIT GPA: 5.0/5.0

University College Dublin, Dublin, Ireland *June 2006*

Bachelor of Engineering (First Class Honors)

Selected Skills and Interests

Publications: Author of a range of publications in peer-reviewed academic journals, applying optimization and statistical methods to energy, climate, and space questions.

Coursework: Graduate coursework across MIT and Stanford in optimization, statistics, probability, stochastic modeling, machine learning, mining massive datasets, economics, policy, power systems. Weekly seminars at the frontiers of data, learning, optimization, and energy systems.

Teaching: [Stanford University] Introduction to Optimization (accelerated), Systems Modeling for Energy and Climate Policy Analysis.

Awards: UCD Presidential Scholarship, MIT TPP Letter of Recognition of Academic Performance, EPRI Performance Recognition Awards (x3), Irish Echo newspaper 40 under 40 2018, UCD Civil Engineering Wall of Fame 2018.

Languages: English, Gaeilge (Irish).

Selected programming languages and software: Python, Julia, GAMS, MATLAB, MPSGE, R, shell scripting.

Selected interests: Hurling, history, artificial intelligence.