Curriculum vitae
February 2020

Peter_De_Ford@McKinsey.com
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Peter De Ford

Education

MSc. degree in Mathematics of Real-World Systems (Complexity Science), The University of Warwick (UK), September 2016

Topics: complex systems, data science, network theory, differential equations and numerical methods

B.Sc. and Licentiate degrees in Electrical Engineering, University of Costa Rica, February 2011 and August 2014 (respectively)

Topics: computer vision, image processing, probability and stochastic processes, algorithms, control theory and estimation theory

High School degree, Lincoln School Costa Rica, June 2005

International Baccalaureate diplomas: history (high level), economics, mathematics (high level) and physics

Current position

Geospatial Data Scientist, McKinsey & Company (QuantumBlack North America), February 2018 – Present

Projects

- Projections of climate change effects on society in 2030 and 2050 (report)
- Creation of data-based tools for rural electrification with renewable energies in four African countries
- Use of satellite imagery to assess natural disaster damage of schools in one African country
- Creation of public infrastructure access indicators in one African country
- Optimization of electrical connections between turbines in a wind farm in the US
- White space analyses for retail companies in the US and Mexico

Previous positions

Co-founder of OneTwoTrail tourism app, February 2017 – January 2018

The app (link) allows the tourist to discover travel experiences and create customized itineraries

Associate consultant, Polymaths Consulting, Birmingham (UK), May 2016 - January 2018

Projects

-Bayesian network model for education policy-making in Medellin

-Indicators of humanitarian aid performance in Afghanistan

Visiting Scholar, London Mathematical Laboratory (UK), October - December 2016

Projects

Vehicular traffic modelling for UK's highways

Teacher of Probability and Random Processes, University of Costa Rica, March – July 2015

Topics: probability, statistics, random processes, birth and death processes and Markov chains

Research & Development engineer, Grupo Electrotecnica, September 2011 – September 2015

Projects

Design and prototyping of NOMAD – a premium modular data center solution (link)

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Social projects

English teacher once a month, Rahab Foundation, Costa Rica, April – December 2019

Volunteer with Syrian refugees, Salam LADC, Bekaa Valley, Lebanon, January - February 2017

Geospatial analyst, The Port Humanitarian Hackathon at CERN, Switzerland, October 2016

Activity maker once a month, Doña Melba's Orphan House, February 2012 – May 2013

Manager of a community upgrading project in the jungle, Theos Place, Costa Rica, April 2012

Cafeteria administrator and English teacher, Equinox Cafe & School, Mauritania, January – March 2008

Academic honors, awards and grants

Most innovative datacenter solution of 2018 in Latin America (awarded to NOMAD), Datacenter Dynamics Awards 2018 (Brazil)

Distinction in MathSys master's degree, The University of Warwick (UK), September 2016

Best team prize, UK graduate Modelling Camp, University of Oxford (UK), March 2016

Chevening Scholarship 2015-2016, UK government

Kaust Fellowship 2015-2017, King Abdullah University of Sciences and Technology

Erasmus Mundus European Master in System Dynamics Scholarship, 2015-2017

Financial grant Fl-1J58-14, Costa Rican ministries MICITT and CONICIT for master studies

Honors diploma and honors mention in thesis, Licentiate degree in Electrical Engineering, University of Costa Rica, August 2014

Scholarship and Jury's Choice Poster Award in Hands-On Research in Complex Systems School, International Centre for Theoretical Physics (ICTP), Trieste, Italy, July 1 – 12, 2013

Honors diploma, B.Sc. degree in Electrical Engineering, University of Costa Rica, February 2011

United States President's Education Award for outstanding academic achievement in Lincoln High School, 2005

Scientific publications

International Conference on Intelligent Transportation Systems (ITSC), December 2018, Hawaii (USA), *Estimating Baseline Travel Times for the UK Strategic Road Network*

Data for Policy 2017, September 2017, London (UK), *Indicators of humanitarian aid performance using online data: case-study of Afghanistan in 2015*

IEEE 11th International Conference on Electrical Engineering, Computing Science and Automatic Control 2014 (CCE 2014), Ciudad del Carmen (Mexico), October 2014, *Maximum Likelihood Thresholding Algorithm Based on Four- Parameter Gamma Distributions*

Software skills

Python, R, R-Shiny, Alteryx, QGIS, ArcGIS, Julia, Matlab, C/C++

Academic areas of interest

Data science, geospatial analysis, systems theory, network models, mathematical modelling, electrical engineering, climate change, humanitarian aid, economic development and societies as organisms

Languages

Spanish (native) and English