

DAVID DESMET

1776 Main St., Santa Monica, CA ◊ Room m1427w
ddesmet@rand.org ◊ Ext. 8231

EDUCATION

Pardee RAND Graduate School

Doctorate of Philosophy (Ph.D.) in Public Policy
RAND Corporation

September 2019 - 2023 (expected)

Carnegie Mellon University

Master's of Science (M.S.) in Civil & Environmental Engineering
Department of Civil & Environmental Engineering

August 2017 - December 2018

University of California, Berkeley

Bachelor's of Science (B.S.) in Materials Science & Engineering
Department of Materials Science & Engineering

August 2010 - May 2014

WORK AND RESEARCH EXPERIENCE

USACE, ERDC (Engineer Research and Development Center)

Research Environmental Engineer

May 2018 - July 2019

- Developed application in Python for calculating and visualizing efficient dredging partitions.
- Performed repeated measures statistical analysis and constructed datasets within R.
- Prepared geospatial analysis for carbon sequestration sites and military sites with Quantum GIS.

Hammett & Edison, Inc.

Staff Engineer

June 2014 - October 2016

- Modeled antenna radiation patterns on rooftops, towers, and poles for base station proposals.
- Evaluated sites for compliance with FCC regulations and worked with clients to triage non-compliance.
- Developed and executed software for more efficient and improved topology modeling.

PUBLICATIONS

1. Rycroft, T., Wood, M., Zemba, V., Kennedy, A., Weiss, C., DeSmet, D., Ali, R., Linkov, I. (*Integrated Environmental Assessment and Management*). A method for assessing the sustainability of advanced materials using multi-criteria decision analysis and the triple bottom line.

CONFERENCE & WORKSHOP LEADERSHIP

Synthetic Biology & Biosecurity Research Workshop

Lausanne, Switzerland

June 2019

NATO Science for Peace and Security

- Planning Committee

AWARDS & PROJECTS

Energyhack 2018

Boston, MA

November 2018

Massachusetts Institute of Technology

- Analyzed demand curves and pricing variability for the MIT campus.
- Built optimizable models using R to determine the best energy portfolio to power the campus.
- Incorporated short- and long-term costs and expected emissions rates.

Hack-Auton 2018

Pittsburgh, PA

April 2018

Carnegie Mellon University

- First place within our problem group for Auton Lab's data science competition.
- Analyzed telemetry data from aircraft regarding maintenance and upkeep to predict machine health.
- Crafted a machine learning algorithm based on logistic regression.

Algorithmic Commodities Trading

Sonoma, CA

October 2016 - June 2017

- Analyzed market conditions and developed proprietary trading strategies based on these observations.
- Co-operated a trading account which ran autonomously on these algorithms.

PRESENTATIONS

A Multi-Criteria Decision Analysis (MCDA) Data Fusion Approach for Uncertainty Reduction in Data Sparse and Decision Support Applications

Society for Risk Analysis Annual Conference

New Orleans, LA

Dec. 2-6, 2018

SKILLS & STRENGTHS

Data Analysis

R, Python, MATLAB. Experienced in machine learning & data science.

GIS

ArcGIS Pro, QGIS. Experienced in data acquisition sources.

RELEVANT COURSES

Techniques & Methods

Energy Policy & Emerging Energy Policies

Energy Demand & Utilization

Data Analytics (R, Tableau, SQL)

Applied Data Science (R, Python)

Health Care GIS (ArcGIS Pro, QGIS)

Photovoltaic Physics

Python for Engineering Applications

Programming for Engineers (MATLAB)

Other Courses

Climate Change Science

Climate Change Adaptation

Introduction to Sustainable Engineering

Energy Innovation & Entrepreneurship

Linear Algebra

Multi-Variable Calculus

Combustion and Air Pollution Controls