Nicholas Kullman

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SUMMARY

- OR experience
    - Stochastic dynamic programming and Markov decision processes
    - Math programming: construction and solution of linear/integer and multi-objective optimization models
- Analytics – Data manipulation, analysis, and visualization
- Innovative – 25+ patents
- Strong quantitative skills – B.S. in Physics, M.S. in QERM, Ph.D. in OR
- Fast-learner; effective problem solver and communicator; able to adapt and collaborate
- Computer programming – Java, Python, D3, CPLEX, JavaScript, Gurobi, ArcGIS, HTML

EDUCATION

University of Tours, France - *PhD Computer Science (Operations Research)*

JAN 2017 - DEC 2019

University of Washington, Seattle, WA - *MS Quantitative Ecology and Resource Management*

SEP 2013 - DEC 2016

University of Missouri, Columbia, MO - *BS Physics, minor in mathematics*

AUG 2007 - MAY 2011

- Phi Beta Kappa, Departmental Honors, Summa Cum Laude, 3.98 GPA

SELECTED EXPERIENCE

University of Tours, France - *Research Assistant*

JAN 2017 - PRESENT

- Formulate and solve stochastic dynamic programming models in autonomous vehicle fleet operations and electric vehicle logistics
- Design and implement heuristic policies and exact optimization methods to solve Markov decision processes
- Develop and maintain project's Java codebase on GitHub

CIRRELT, HEC Montréal, Montréal, Canada - *Visiting Doctoral Researcher*

OCT 2018 - DEC 2018

- Formulate models in autonomous vehicle fleet operations
- Implement solution methods leveraging machine learning algorithms

University of Washington, Seattle, WA - *Research & Teaching Assistant*

SEP 2013 - DEC 2016

- Established framework for quantification of conflict among objective functions in multi-objective optimization
- Developed & distributed Java application to solve multi-objective optimization problems using IBM's CPLEX optimization engine
- Designed interactive web-based visualizations using D3 (JavaScript)
- Led labs for "Optimization Techniques for Natural Resources"

Sprint, Overland Park, KS - *Telecom Design Engineer*

JUL 2011 - AUG 2013

- Design & lead experiments for telecom equipment; analyze, deliver results
- Analyze threats from intermodulation distortion

SELECTED PATENTS

US Pat. 9,094,814 - *Provision of relay operation information to a wireless communication network*

US Pat. 20,140,321,367/European Pat. 2989852 - *Wireless communication system with multiple Device-to-Device communication configurations*

SELECTED PRESENTATIONS

Odysseus 2018 - *Dynamic Electric Vehicle Routing with Mid-route Recharging and Uncertain Availability*
JUNE 2018

INFORMS TSL Conference 2017 - *Electric Vehicle Routing with Uncertain Charging Station Availability & Dynamic Decision Making*

JUL 2017

COMMUNITY INVOLVEMENT

Vehicle Routing Problem Repository - *lead developer of Mapper utility*

Vasculitis Foundation - *website content and development assistant*

Fred Hutch Cancer Research Center - *visualization developer*