

# Jeff Decary

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## EDUCATION

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### University of Connecticut

PhD in Business Administration

Storrs, CT, United States

Aug. 2020 – Present

- Concentration: Operation and Information Management (OPIM)

### Polytechnique Montreal

M.Sc.A. Mathematics

Montreal, QC, Canada

Aug. 2018 – Sept. 2020

- Member of the Canada Excellence Research Chair in Data Science for Real-Time Decision-Making

### University of Quebec in Montreal

B.Sc.(Honors) Actuarial Science

Montreal, QC, Canada

Aug. 2015 – May 2018

## PUBLICATION

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### Under revision at Production and Operations Management (POMS)

- Decary, Jeff., Bergman, David, Cardonha, Carlos, Imbrogno, Jason, Lodi, Andrea.  
“The Madness of Multiple Entries in *March Madness*”.
  - \* Proposed a strategy and three heuristics using mixed-integer linear programming to fill March Madness brackets
  - \* Our best solution outperforms all 12,605 entrants of a DraftKings contest in term of expected score
  - \* Our best solution has a probability of 1.82% of winning \$1 million for given an investment of \$10,000 which is the 2nd highest among all entrants

### Under revision at Operations Research

- Decary, Jeff, Zou, Bin, and Bergman, David.  
“Parlay Building for Simultaneous Events.”
  - \* Build a prediction model for each statistic (Points, Assist, Rebound, Block) of each NBA player
  - \* Development of an exact algorithm to find optimal betting allocation given a collection of parlays

### Paper in Progress

- Decary, Jeff, Bergman, David, Day, Robert. “Pricing Mechanism for Daily Fantasy Sports.”
  - \* Build a simulation model of the scoring distribution of each NBA player
  - \* Develop strategy for different types of gambler
  - \* Analyze the impact of the *Daily Fantasy Player* pricing on the winning odds of different types of gambler
- Decary, Jeff, Wang, Keliang, Cardonha, Carlos, Bergman, David, Bai, Miao.  
“Branch-and-Price Algorithms for Embedded Neural Network Optimization: Application on a Surgical Room Scheduling Problem”
  - \* Simulation model that forecasts the cost of an operating room surgery schedule given randomly distributed surgical operating time and recovery time
  - \* Neural Network to forecast a schedule’s cost to an operating room surgery schedule
  - \* Branch-and-Price algorithm to optimize embedded Neural Networks

## WORK EXPERIENCE

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### Graduate Assistantship

Aug 2020 – Present

University of Connecticut

Storrs, USA

- OPIM 3602 (Spring 2024): Held office hours and Graded homeworks and exams
- OPIM 3104 (Spring 2024): Gave a Machine learning lecture, held office hours and graded homeworks
- OPIM 3103 (Fall 2022-Spring 2023): Instructor. Introduced Excel and business information systems through data analysis
- OPIM 3103 (Fall 2020, Spring 2021, Spring 2022): Held office hours, and graded homeworks and exams
- OPIM 3104 (Fall 2021, Spring 2024): Held office hours, graded exams and assisted the professor during in-class activities to guide students

### Asset Management and Pensions Intern

May 2017 – Aug. 2017

Normandin Beaudry

Montreal, Canada

- Actuarial evaluation and financial projection for pension funds
- Preparation of the client's annual asset review presentation

### Business Intelligence Intern

Jan. 2016 – Jul. 2016

The Co-operators

Montreal, Canada

- Legacy systems reconciliation
- Database analysis
- Solution and design development research

## AWARD & ACTIVITIES

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### Named Scholar-Scholarship

2023-2024

### UConn School of Business Dean's Summer Fellowship

2022-2023

### Predoctoral Summer Fellowship

May 2021

### Third place at Munich Re Cup

Jan 2018–April 2018

- The Munich Re Cup is a case competition open to the Centers of Actuarial Excellence in Canada.
- Developed an accelerated underwriting program using machine learning
- Presented to senior executives of Munich Re

### Completion of professional exams of the Society of Actuaries(SOA):

2015-2017

- Probability
- Financial Mathematics
- Models for Financial Economics
- Construction of Actuarial Models

## VOLUNTEERING

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### CP2023

Aug-Sept 2023

- Registration and Check-In
- Session Assistance
- Directional Support
- Poster Session Assistance
- General Assistance

### CP2021

Oct 2021

- Technical Support

### Secretary of the board of directors of *Tennis de table Quebec*

May 2019-June 2023

- Making financial and operational decisions about the priorities of the Federation given a budget of \$500,000
- Received funding of \$46,000 from the Government of Quebec to develop a computer vision tool using Open-MMLab-mmdetection to do video analysis of table tennis matches

## LANGUAGES, SKILLS, AND INTEREST

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- French & English
- Python, R, Julia, MatLab, Pytorch, Gurobi and  $\text{\LaTeX}$
- Sports (Racket sports and team sports), Board games, Cooking, and Travelling