

# Veronica M. White

LinkedIn: <https://www.linkedin.com/in/veronicamwhite> Website: <https://vmwhite.github.io>

## Statement of Purpose

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I am a Ph.D. candidate in Industrial and Systems Engineering at UW-Madison. My focus area is operations research with an emphasis on Optimization (stochastic, discrete, mixed-integer), simulation (discrete event), program evaluation (causal inference, statistical tests), and implementation science. I worked on improving the large-scale mixed integer multi-stage optimization Amazon Devices Supply Chain model through my internship at Amazon, Inc. In the future, I want to work on models that positively impact our society. I additionally have experience writing technical reports and delivering technical ideas to a variety of practitioners and scientists from contracting with the National Institute of Justice (NIJ). At Sandia, It would be my pleasure to aid in analyzing and predicting complex and highly interdependent system behavior that is critical to our nation's security.

## Education

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### University of Wisconsin – Madison

Doctor of Philosophy, Industrial Engineering

Master of Science, Industrial Engineering

**Anticipated Graduation:** Dec 2023

May 2019

### Iowa State University – Ames, Iowa

Bachelor of Science, Industrial Engineering

May 2017

Magnum cum Laude

## Relevant Research Experience

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### Policing and Opioid Use Disorder– Graduate Research Assistant

October 2019 to Present

*UW Industrial and Systems Engineering – with Dr. Albert & Dr. Zayas-Caban*

- Study Overview: NSF funding for analysis of a smart policing initiative, MARI, along with mathematical modeling for analyzing policing operations
- Developed causal inference methods to evaluate 6-month recidivism outcomes
- Developed discrete event simulation to understand county-level outcomes of the program
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### Stochastic Ambulance Dispatching Modeling – Graduate Research Assistant

May 2018 to June 2020

*UW Industrial and Systems Engineering – with Dr. Albert; resulting [paper](#) in press.*

- Completed and summarized computational results using Python for a stochastic programming model that optimizes the location and dispatching of emergency medical service (EMS) vehicles

## Additional Research Experience

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### Research Assistant - Contractor

October 2020 to Present

*National Institute of Justice (NIJ), [RAP program](#)*

- Developed two NIJ solicitations and evaluated the scientific aspects of another solicitation's grant review process that provided program grants and research-based grants
- Added to two NIJ research portfolios on hot-spot mapping metrics and mass shootings
- Enhanced Office of Justice Program's human subjects IRB approval process
- Organized April 2021 Forensic Intelligence Workshop for over 50 federal partners
- Oversaw and guided projects on specialized justice focus areas of hot-spot mapping and recidivism
- Served as a technical expert for a significant segment of a social science focus area or program area, such as machine learning and mathematical modeling of systems
- Reviewed and evaluated research in a broad specialized scientific area of the social sciences, such as implementation science in criminal justice settings.

### Iowa e-Health Project –Research Assistant

October 2018 to May 2020

*University of Wisconsin Madison, Center for Health and Systems Studies – with Dr. Gustafson & Dr. Molfenter*

- Study Overview: RCT on implementing an addiction-based recovery mobile application in the clinic setting.
- Working with Iowa Department of Public Health to obtain de-identified data for the study
- Wrote [protocol paper](#), summarized survey results, and developed analytic procedures for future results paper
- Planned and developed study protocol execution and materials for training at 11 addiction organizations

### Predicting Post Surgery Prescribing of Opioids – Graduate Research Assistant

September 2017 to May 2018

*UW Industrial and Systems Engineering – with Dr. Bain MD & Dr. Li*

- Developed study design after completing literature review and interviews of physicians and patients
- Managed and cleaned database of 250+ orthopedic patients, which was collected from multiple sources
- Resulting [paper](https://doi.org/10.1109/JBHI.2020.2992973): <https://doi.org/10.1109/JBHI.2020.2992973>

### Iowa Food Hub Network Project – Undergraduate Research Assistant

September 2016 to June 2017

*Iowa State University – with Dr. Krejci*

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- All deliverable materials can be found on our project site: <https://sites.google.com/site/afhnetwork/home>
- Created labeling system in VBA and integrated it into our inventory tracking-transportation application

## Industry Experience

**Amazon – DIAL OR Scientist Intern**, Amazon Devices optimization team Summer 2020

*Virtual Due to COVID-19*

- Created a new solver that separated the final Amazon Devices supply chain optimization model from the main Amazon Devices Solver, allowing it to be solved separately and repeatedly
- Communicated and documented model logic for optimization team, demand planning team and contractors
- Corrected and simplified several model constraints handling backlog and inventory penalties

**Corporate Quality Engineering Intern** Summer 2016 & Summer 2017

*Shure Incorporated – Niles, IL*

- Utilized Minitab to analyze a destructive gauge R&R, Salt-fog study using ANOVA, etc.
- Used hypothesis testing and accelerated life testing to determine durability and reliability of new products

**Safety & Ergonomics Intern** January 2015 to August 2015

*Lennox International – Marshalltown, IA*

## Service and Leadership Experience

**Ad Hoc Reviewer for the Journal of Implementation Science** Aug. 2020 to Present

**Grant Reviewer for NSPN Chapter Development Fund** Jun. 2021 to Aug. 2021

**Graduate Student Advisory Council – ISYE representative** October 2020 to Present

- GSAC provides feedback on topics effecting graduate student life to College of Engineering Leadership
- Participate in ISYE Student and Alumni Affairs cluster focused on enhancing the ISYE student experience
- Created 24/7 [google form](#) for ISYE graduate students to provide insight into future GSAC discussions

**INFORMS UW-Madison Student Chapter - Vice President** September 2019 to September 2020

- Won INFORMS 2020 Student Chapter Annual Award at the Cum laude level
- Advised undergraduate team in INFORMS Spring 2020 student competition

**Tau Beta Pi Wisconsin Alpha Student Chapter - Pi Mile Run Co-Coordinator** October 2018 to April 2019

- Organized, fundraised, and secured a venue and permits for a [local 5k/10k](#) that hosted 100 runners and raised over \$2,000 for Occupaws Guide Dog Association

**Tau Beta Pi Iowa Alpha Student Chapter - Vice President** January 2016 to May 2017

- Led committee to compete in SourceAmerica's 2016-2017 [Design Challenge](#)
- Collaborated with the Advisory board to provide direction and new ideas for the chapter

## Additional Presentation Experience

**Teaching Assistant (TA):** Created and facilitated weekly discussion sections to summarize and practice course material. Held weekly office hours. Provided feedback to students to improve their knowledge.

- I SY E 323 – Operations Research – Deterministic Modeling Spring 2018, Fall 2018
- I SY E 313 – Engineering Economic Analysis Fall 2017, Summer 2018

**Tutor:** Worked with 5 groups, of 3-6 students. Each group meet bi-weekly. Worked through example problems and answered student questions.

- Statistics 231 – Introduction to Statistical Concepts and Methods Fall 2016, Spring 2017
- Physics 222 – Introduction to Classical Physics 2 Fall 2016, Spring 2017

## Recent Honors and Awards

DAS/SDP Decision Analysis Practice Award, Finalist Fall 2022

INFORMS DEI Ambassador Spring 2022

IISE Future Faculty Fellows (3F) Program Spring 2022

National Institute of Justice Research Assistant Program Fellowship Fall 2020 & Fall 2021

## Relevant Software and Programming Knowledge

Python	Julia	Matlab	R	STATA	VBA	Java
Minitab	Arena	Working knowledge of:		SQL	SPSS	HTML/CSS/JavaScript