

# Bryan Melchert

GRADUATE RESEARCH ASSISTANT  
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## Education

**M.S. Mathematics** (emphasis: Statistics, Data Science) - Graduate Research Assistant (3.67 GPA)  
*Purdue University Fort Wayne ~ 2018-Current*

- Research Project: Classification and regression machine learning to build a salmon migration timing forecast model for \$1.5 billion Alaskan commercial fishery. Features to include live-data model updates during fishing season, with interactive data visualization applications for end-user support.
- Research Project: Neural network and deep learning classification model to identify primary determinants of patient satisfaction for a public health department using a survey response database.
- Relevant coursework: Algorithm Design, Optimization, Probability, Statistical Modeling & Learning, Time Series, Design of Experiments (A/B Testing), Linear Algebra, Big Data & Cloud Computing
- DataCamp certifications: *Data Scientist w/ Python* career track, *Importing & Cleaning Data*, *Machine Learning*, *Data Manipulation*, *Python Programming*, *R Programming*

**B.S. Industrial and Systems Engineering** - Minor in Mathematics (3.6 GPA)  
*University of Wisconsin - Platteville ~ 2016-2018*

- Senior project in a team engineering environment using linear programming to optimize freight shipping costs by \$8300 globally, while optimizing production schedule through Excel VBA
- Relevant Coursework: Regression Analysis, Quality Engineering, Operations Research, Production & Operations Analysis, Six Sigma and Lean, Statistical Process Control, Engineering Economics
- Awards: Dean's List; Tau Beta Pi Honors Engineering Society; Alpha Pi Mu Honors I.E. Society

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## Skills

*Computation:* Python (Tensorflow, Keras, Scikit-learn), R (Rstudio, Rmarkdown), SQL, LINGO, Minitab, Bokeh, Tableau, Github, Matlab

*Data Science:* Machine & deep learning, Data visualization/ cleaning/ reporting, Database querying

*Management:* Six Sigma Green Belt, Project management, Customer service, Budgeting, Scheduling

*Prototyping:* Solidworks, Fusion360, CNC machining, 3D printing & finishing, Arduino microcontrolling

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## Professional Experience

**Commercial Fisherman - F/V Bracor Bay; Bristol Bay, AK** (*Summers from 2011-2018*)

Deckhand on salmon gillnetter performing all duties of fishing, navigation, and seamanship to high level

**Owner and Skilled Tradesman - 3<sup>rd</sup> Coast Painting & Remodeling; Aurora, IL** (2013-2017)

Cofounded and managed residential construction company; Performed all sales and project planning

**Operations Manager - Sodexo, Inc; Chicago, IL** (2008-2012)

Managed 13 employees and \$125,000 annual budget overseeing all campus grounds and sports fields

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## References

**Dr. Yihao Deng**, Professor of Statistics

t: (260) 481-418 e: dengy@pfw.edu

**Dr. Peter Dragnev**, Mathematics Department Chair

t: (260) 481-6382 e: dragnevp@pfw.edu

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