

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: Forecasting salmon migration timing using time series machine learning for \$1.5B Alaskan commercial fishery. Publishable work includes LSTM, Garch, ARIMA, & GAM modelling with Bayesian hyperparameter optimization and EDA/ results visualization using Tableau & Bokeh
- Research Project: Neural network and ensemble classification model identifying primary patient satisfaction predictors for public health department using 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) – Magna Cum Laude
University of Wisconsin - Platteville ~ 2016-2018

- Senior project in team engineering environment using linear programming in LINGO to reduce 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

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/ transformation, Database querying

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

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

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 - 3rd 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

References

Dr. Yihao Deng, Professor of Statistics

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Dr. Peter Dragnev, Mathematics Department Chair

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Corey Boone, Captain F/V Bracor Bay

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