

Matt Dzugan

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Data Science Manager

Professional Experience

Uptake Technologies

Chicago, Illinois

2017 to 2019

2018 Data Science MVP

Data Science Manager

Managed a team of 8+ data scientists to develop simulations & models worth over \$10M/yr in recurring value by identifying inefficiencies in energy generation of wind turbines & recommending actions for adjustments & repairs

- Engaged with customers to understand business cases & created quarterly projects & goals for internal team
- As customer-facing team leader, regularly presented technical concepts to various degrees of non-technical audiences, established trust in the team's offerings & gained buy-in on the \$10M+/yr value of the models
- Worked with internal product and customer-success teams to develop 10+ user-friendly visualizations and workflows that allow customers to extract value from the deeply technical work of the Data Science Team
- Led a team of data scientists in developing a suite of 18 machine learning models that work together to identify inefficiencies in wind turbine performance in a way that is generalizable to all makes and model.

The Boeing Company, Satellite Development Center

El Segundo, California

2012 to 2017

2017 World-Class Engineer Award Recipient

Senior New Business Campaign Team-Lead: End-to-End Communications Architecture

Led the End-to-End team on multiple design bids resulting in winning over \$1B in new satellite contracts

- Communicated with external customers, and professionally challenged their assumptions allowing the internal Boeing team to pursue design options that were ultimately critical to our contract awards

Iterated through multiple design iterations, tasking the internal team with actionable exploratory analyses, and creating several key performance measures to engage the potential customer and mature the design

Senior Satellite Communications Systems Architect

Identified key system-level design decisions & modeled their outcomes & impacts for 3 unique satellite systems

- Traded several vastly different architecture solutions by building detailed computational models of the systems, evaluating performance using many standard and custom metrics, and estimating impacts to both capital and operating expenditures
- Created now-standard tools and models for network throughput optimization/calculation, terrestrial multipath & reflection analysis, end-user demand quantification, system performance and geospatial data visualization
- Regularly communicated analysis results to internal and external audiences, executive and technical, most notably to the Wireless Telecommunications Bureau of the FCC (Federal Communications Commission)

Digital Signal Processing Algorithms Designer

Designed and tested error-detection/correction algorithms and circuits used on 4 spacecraft currently on orbit

- Designed several error-detection/correction algorithms using MATLAB & Simulink and identified pros and cons of each to enable final selection for flight hardware
- Implemented design in VHDL and developed a suite of 100+ test waveforms to ensure intended functionality

Education

Master of Science in Electrical Engineering

Northwestern University

Department of Electrical Engineering & Computer Science

3.8 GPA

Evanston, IL

Wireless Communications Systems

2012

Bachelor of Science in Electrical Engineering

Northwestern University

Department of Electrical Engineering & Computer Science

3.8 GPA

Evanston, IL

Magna Cum Laude

2012

Technical Skills

Analysis/Modeling/Simulation · Machine Learning · Parallel/Cloud Computing · Communication/Visualization

Bash · C · C++ · Javascript (Cesium, D3, Three) · MATLAB/Simulink · Python (scikit-learn, NumPy, Pandas, TensorFlow) · R(data.table, tidyverse, ggplot) · SQL · Tableau · VBA · VHDL/Verilog