

# Max Dietrich

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**SUMMARY** Mechanical engineer with experience in building and using data sets to describe how complex systems work. Seeking a master's degree in data science to learn more advanced methods for gathering raw data and deriving insights from them.

**EDUCATION** **Olin College of Engineering**, Needham, MA  
B.S. Mechanical Engineering Aug 2015 – Dec 2019

- 3.89 GPA
- Received a merit-based Olin Tuition Scholarship

**Course work:** Software Design, Bayesian Inference and Reasoning, Linearity 1 (Linear Algebra), Linearity 2 (Multivariable Calculus), Partial Differential Equations, Modeling and Simulation of the Physical World.

**Capstone:** Worked with the Ford Motor Company to create recommendations on how to implement personalized, data-driven user experiences by reviewing literature, conducting user interviews, and synthesizing data from multiple sources.

**PUBLICATIONS** Lee, Christopher L, et. all. (2018). A Three-Dimensional-Printed Patient-Specific Phantom for External Beam Radiation Therapy of Prostate Cancer. *Journal of Engineering and Science in Medical Diagnostics and Therapy*, 1(4).

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**WORK EXPERIENCE** **SharkNinja LLC**, Needham, MA

Mechanical Engineer, Advanced Development Feb 2020 – Oct 2021  
New Product Development Intern June – Aug 2019  
Advanced Development Co-op Jan – July 2018

- Analyzed test data in Microsoft Excel to create empirical models for simulating vacuum cleaner performance.
- Cleaned and combined data from multiple sources to build databases of vacuum cleaner performance and specifications. Applied these data to show our advantages versus competitors and opportunities for improvement.
- Coded a model based system engineering (MBSE) program in Excel and applied it to validate dozens of potential vacuum cleaner architectures and select the most promising ones for prototyping.

**Boeing Commercial Airplanes**, Everett, WA  
Mechanical Systems Engineer Oct 2021 - Present

- Analyzes flight test and maintenance data to find patterns and irregularities in the performance of equipment cooling systems.
- Works with cross-functional teams to revise airplane dispatch requirements and conform with FAA regulations.
- Ensures that safety analysis is documented properly for the 777-X Equipment Cooling Systems.

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**SCHOOL PROJECTS** **Software Design**, Fall 2019

- Wrote a python script which used the Reddit API to gather recent comments from user specified subreddits and visualized differences in the sentiments of each group. This data was used to show how different communities reacted to the outcome of sporting events.
- Created a simulation of wildfire spreads in Yosemite Valley using GIS data. Wrote functions to read and write large files mapping data for foliage, elevation, and weather to geographic location.

**COMPUTER SKILLS**

- Python, MATLAB, Mathematica, Excel, Microsoft Office

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