# DENNIS MOTT
## ENGINEER / DATA SCIENTIST

## CAREER OBJECTIVE

Highly motivated engineer with over a decade of experience in a fast-paced manufacturing environment seeking a full-time remote data science role to leverage expertise in Python, machine learning, and statistical analysis for data-driven decision-making.

## WORK EXPERIENCE

**Mold Design Engineer III**                          *July 2018 - current*
DENSO Manufacturing Michigan, Inc, Battle Creek, MI
+ *Mold Design Engineer II (2016-2018)*
+ *Mold Design Engineer I (2014-2016)*
+ *Mold Design Co-Op (2013-2014)*

- Collected data and created regression models to predict warp based on part shape, saving over $50k in tuning costs.
- Utilized PowerBI to create an executive dashboard for department tooling profit and cost savings.
- Used NX to design and implement hundreds of mold changes to improve product quality and safety.
- Performed Moldex3D injection molding simulation studies to optimize the fill pattern and warp for both hot and cold runner molds.
- Efficiently managed new mold builds including product design reviews, quoting, mold inspections, progress meetings, molding process rheology.
- Collaborated with quality and product design engineers to ensure new products meet design standards.
- Presented fan shroud warp prediction at the 2017 and 2019 Moldex3D North America User's Conference.
- Embraced additive manufacturing by designing dozens of innovative 3D printed steel conformal inserts, saving over $50k in maintenance.
- Mentored several engineering interns and led them through various projects that were assigned to them.

## PROJECTS

**Cooling Fan Warp Prediction - Machine Learning**
Collected part measurement data, product design data, steel measurement data. Utilized Orange for data exploration and to create machine learning models to predict fan warpage. Saved over $50k in tuning costs.

**Melanoma Skin Cancer Detection using a CNN**
Built a Convolutional Neural Network from scratch to predict whether skin lesions are benign or malignant. Utilized Flask to incorporate model into web app.

**Manufacturing and AI: Job Displacement Fears**
Examined potential ethical issues as AI is introduced into the manufacturing workplace. This project was completed for DTSC 690: Ethical and Philosophical Issues in Data Science at Eastern University.

**Personal Finance Dashboard**
Utilized python packages Plotly and Dash to create a personal finance dashboard to analyze spending and monitor account balances.

## CONTACT

✉ Dennis.Mott22@outlook.com
📱 (269) 420-5009
📍 Grand Rapids, MI
🌐 https://2dm2.github.io/
✳ www.linkedin.com/in/2DM2

## EDUCATION

M.S.
Eastern University
Data Science
2023 – 2024

B.S.
Western Michigan University
Major: Mechanical Engineering
Minor: Mathematics
2010 – 2014

## CERTIFICATIONS

- Data Science (Codecademy)
- Design of Experimentation (SAE)
- Injection Molding Essentials (RJG)
- NX Design (Siemens)

## SKILLS

- Python / R
- Machine learning
- Tableau / PowerBI
- PostgreSQL
- Flask
- Microsoft Office
- Moldex3D
- NX

## HOBBIES

- Traveling
- Woodworking
- Golfing