MADHUMITHA NATARAJAN

PACKAGING, PRINTING & PROCESS MANAGEMENT

CONTACT

natarajan.madhumitha@gmail.com
+1 517-402-9984
East Lansing, Michigan
linkedin.com/in/madhumithanatarajan/

PROFILE

A **Packaging science engineer**, holding knowledge of packaging, printing, and process management interested in gaining exposure in the field of packaging and its related sectors.

EDUCATION

Master of science in Packaging Science
Michigan State University
Graduation Date – May 2021
CGPA - 3.31

Bachelor of Engineering - Printing and Packaging technology
University of Mumbai, India
2013-2017
CGPA: 7.73/10

SOFTWARE SKILLS

- ArtiosCAD, SOLIDWORKS, CAPE, Best Load, PackageSmart, Microsoft Project, AutoCAD, TOPS Pro, Microsoft Office.
- CorelDRAW, Photoshop, Illustrator

PROCESSING AND TESTING TECHNIQUES

- Blown film extrusion, Cast film extrusion, compression molding, Three-piece mixer machines.
- Permeability testers, FTIR, DSC, UV-Vis instruments.

CERTIFICATIONS

- **Pressure –Sensitive label conversion** from **Avery Dennison**
- **3D PRINTING**
- **Lean Six Sigma Green Belt**

KEY COURSES

- **Polymeric Packaging materials, Advanced Packaging Dynamics, Medical/Pharmaceutical Packaging.**

PROJECTS

Master of Science, Thesis

Improving Carbon Dioxide and Oxygen barrier properties of Green Polyethylene by addition of Cellulose nanocrystals (CNC).

- The goal is to have a **single layer** of **rigid** and **flexible biobased polyethylene** with the desired gas barrier instead of multilayers. Biobased polyethylene as single layer will be a **greener alternative** and contribute towards **sustainability**.

Undergraduate Projects

- **End to End Services of Jobs in Commercial Printing Industry**.
  To study the different types of jobs that are printed in the **commercial printing industry** and to understand the **different processes** and **problems faced** at each stage from pre-press to post press.
- **Printable Conductive Inks and Coatings.**
  The project focuses on **preparing conductive inks** that can be used to conduct electricity in various applications instead of using wire.

EXPERIENCE

JULY 2020 – DECEMBER 2020

Packaging Development Graduate Intern | Genentech

- **Design creation** and **improvisation** for **secondary/tertiary packaging configurations, specifications drawings,** and **assembly drawings** in a **cGMP** environment.
- Assisted on **cGMP** documentations like **impact assessment** for new **thermal shipping system** and **Design Freeze** documentation.
- Supported **ASTM Engineering study** to evaluate the performance of the package.
- Studied the **Kongsberg table prototyping** process and estimated variable **cost savings** to be about **98%** lesser than the current vendor prototyping process.

AUG 2019- MAY 2020

Graduate Teaching assistant | Michigan State University

- Lead the Lab and grading for PKG-315 (Packaging Decision Systems). Taught **CAPE, Microsoft Project, AutoCAD, Package Smart and Microsoft Office** to **100+ students** and received about **80%** positive reviews from students.

JUNE 2017- JUNE 2018

Management Trainee (Packaging and Supply chain) | Pearl Polymers LTD

- Handled **Rigid PET material-based products** from concept to commercialization for various clientele in Food, Pharmaceutical and Agrochemical packaging industries.
- Activities performed include **new product development, cost estimation, blow shell development, prototyping, handling vendors, business development** and working with Injection stretch blow molding (**ISBM**) production and quality/ inspection teams for launches valued up to **1 million rupees** in revenue.

JAN 2017 – MAY 2017

Intern (Packaging and Printing) | The Print Works

Handled end to end services for commercial printing jobs which included **cost estimation, material selection** and hands-on usage of **4 color offset printing machine**.

JUNE 2016 – JULY 2016

Intern (Packaging and Printing) | Sharda Patterns

Assisted on **4 color offset printing machines** and launched a **product for a new client.**