

Advait Sawant

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OBJECTIVE

To leverage my expertise in Machine Learning and Advanced Manufacturing to contribute to the development of innovative solutions that enhance manufacturing processes and efficiency. Seeking a challenging role in a dynamic organization where I can apply my knowledge and skills to solve complex problems and make a positive impact on the industry.

EDUCATION

Pennsylvania State University

Master of Science in Additive Manufacturing & Design

State College, USA

August 2022 - May 2024 (Expected)

Relevant Coursework: Metal Additive Manufacturing, Scientific Principles of Additive Manufacturing, Metal Additive Manufacturing Lab, Non-Destructive Evaluation for Additive Manufacturing, Design for Additive Manufacturing (DfAM)

Birla Institute of Technology and Science, Pilani

Bachelor of Engineering in Mechanical Engineering

Goa, India

August 2017 - July 2021

Relevant Coursework: Production Planning & Control, Advanced Composites, Production Techniques, Engineering Optimization, Quality Control & Reliability, IC Engines, Product Design, Machine Design and Drawing, Material Science and Engineering, Supply Chain Management

MOOCs: SAS Programmer offered by SAS on Coursera, IBM Data Science Professional Certificate offered by IBM on Coursera, DeepLearning.AI TensorFlow Developer(Certificate) offered by DeepLearning.ai on Coursera, SAS Statistical Business Analyst offered by SAS on Coursera

FACULTY RESEARCH & PROJECTS

ML for Defect Detection in Additive Manufacturing under Dr. Edward Reutzel and Dr. Jan Petrich(Ongoing).

- Used Computer Vision techniques on XCT Data to detect porosity defects in test samples.
- Created a framework to handle multimodal sensor data for analysis.
- Ongoing application of Computer Vision on Electro-Optical sensor feeds for defect detection.

Long-Term Creep testing of Roto-Moulded Polymers under Dr. Sachin Waigaonkar.

- We analyzed the long term creep of Rotation Moulded Polymers to determine creep coefficient for long-term use through lab experiments.
- We were accurately able to measure the creep coefficients and pass on the conclusions to our industry partners.

OIT Testing of Polymers under Dr. Sachin Waigaonkar

- We analyzed the Oxidation Inductive Test times of various different polymers to determine their suitability for complex, time-consuming moulding processes.
- With this analysis, we were able to find determine the polymers suitable for recycling and passed on the information to our industry partners.

Analysis and redesign of a moulded product failing in the field under Dr. Sachin Waigaonkar

- We analyzed a rotation moulded product failing in the field using CAD/CAE tools like ANSYS and PTC Creo to determine the cause of failure. We then redesigned the product such that it would not fail in the field with a minimum increase in cost.
- This model was then passed on to our industry partner who implemented the changes and reported on the success of the project.

SCORES

Graduate Record Examination (GRE)

November 5, 2021

- Score: 329/340
- Verbal: 162/170, Quantitative: 167/170, Analytical: 4/6

Test of English as a Foreign Language (TOEFL)

September 11, 2021

- Score: 115/120
- Reading: 30/30, Listening: 30/30, Speaking: 29/30, Writing: 26/30

INDUSTRY EXPERIENCE

Airmeet

Data Science Intern

Bangalore, India

January 2021 – June 2022

- I worked in the Revenue Operations (RevOps) in an analyst role and later in the Analytics team in a data science role.
- In the RevOps team, I created Go-To-Market strategies, competitor Analyses and client data enrichment for shaping the company's sales strategy.
- In the Analytics team, I created machine learning models to analyze vast amounts of data; Some of these models types being: Time-Series Analysis, Regression, Natural Language Processing, and Clustering analysis. I also created automated data pipelines to facilitate easy data retrieval for analysis.

Mentor: Mr. Shardul Walwadkar

Aditya Birla Insulators

Analyst Intern

Halol, Gujarat, India

May 2019 - July 2019

- I worked with the management team at the Aditya Birla Insulators plant at Halol, Gujarat in the Polymer Manufacturing division as an Analyst intern.
- I analyzed the production process and highlighted inefficiencies for throughput improvement.

INDEPENDENT PROJECTS

Blockchain Chain Analyzer

December 2022 - January 2022

- I created a chain analyzer to identify the type of wallets holding assets of a particular protocol on Ethereum and its associated L2 blockchains using DeBank and FTMscan APIs.
- I applied machine learning algorithms on these wallets to cluster these wallets into categories for analysis.

Optimal Business Location Analysis

October 2020 – February 2021

- Created a machine learning model to look at the geographical density of businesses (Coffee shops in this example) and find underserved clusters where a business could be expected to generate a profit.
- Identified the areas in Bangalore where coffee shops could be set up with minimal competition.

TEACHING EXPERIENCE

Pennsylvania State University

ME 330 Computational Tools - FEA and CFD using Solidworks

State College, PA, USA

January 2023 – Present

COMPETITIONS

SAE BAJA 2019

- I was part of the Chassis Division at SAE BAJA BITS Goa chapter. I helped design the chassis in Solidworks, analyze it in ANSYS and build it using novel manufacturing techniques.
- We ranked 19th in the design phase.

SAE Aero 2020

- I was the manufacturing head at the newly formed SAE Aero BITS Goa chapter. I helped design, analyze and manufacture the aircraft using manufacturing methods like 3D printing.
- We ranked 5th in the presentation and 20th overall.

MENTORING EXPERIENCE

- I mentored freshman students as part of the Peer Mentorship Program in my sophomore year.
- Every single mentee of mine cleared their freshman year without failing a single course.