Desi Pilla

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Education

University of Delaware — Newark, DE

Graduate: Master of Science in Data Science — December 2020

Undergraduate: Honors Bachelor of Mechanical Engineering — December 2019

Minors: Mathematics, Physics

- University of Delaware Distinguished Scholar
- GPA of 4.0 on a 4.0 scale
- Graduated C*um Laude* as an undergraduate
- *Francis Lindell Distinguished Senior A*ward Recipient
- University of Delaware Dean's List — Fall 2016 – Present

Work Experience

ViacomCBS: Advanced Advertising — (Remote) New York, NY

Data Science Intern — June 2020 – September 2020

- Applied NLP and Latent Dirichlet Allocation techniques in Python to significantly improve the interpretability and efficiency of survey results
- Deployed the model pipeline using AWS to work in tandem with Slack's interface. Users can utilize a drag-and-drop interface as well as a trained chatbot to access this model without requiring advanced technical skills
- Identified missing dimensions in the original problem which redefined the project scope.
- Combined TensorFlow sentence encoder with Naïve Bayes estimator to extract emotion (75.0% accuracy) and sentiment (79.7% accuracy) labels from Facebook and Instagram comments; deployed with AWS Lambda, SQS.

DuPont de Nemours, Inc. — Wilmington, DE

Software / Mechanical Engineering Intern — June 2019 – August 2019, January 2020

- Eliminated my own position by creating an automated tool for each of my tasks
- Increased ASME code calculation efficiency by 10x by leveraging Mathcad spreadsheets
- Developed analytical tools with VBA to assist in project design decisions
- Received a *Special Thanks Award* from mentor and manager for initiative, work ethic, and contribution

University of Delaware, Department of Mechanical Engineering — Newark, DE

Teaching Assistant — August 2018 – present

- Presented with the *Undergraduate Teaching Assistant Award* (Spring 2020)
- Served as a mentor to 120 undergraduate Mechanical Engineering students

Projects

Twitter Sentiment Analysis Model — Newark, DE

Course: Mathematical Techniques for Data Science (MATH 637) — March 2020 – present

- Applied natural language processing techniques using NLTK to preprocess tweets
- Independently identified and compared several machine learning methods to solve the problem (SVM, Random Forests, Naïve Bayes, Gradient Descent, KNN, Perceptron, and Logistic Regression)
- Achieved 77.94% model accuracy (classification of *negative*, *neutral*, or *positive*) by performing cross-validation to achieve the optimal estimator

Technical Skills

- **Tools:** Python (scikit-learn, NumPy, Matplotlib, pandas, SciPy, NLTK), Git, Amazon Web Services (Lambda, EC2, Step Functions, EFS, Athena, SQS)
- **Techniques:** Machine Learning, Data Analysis, Data Visualization