# Animesh Goyal

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## EDUCATION

**THE UNIVERSITY OF TEXAS AT AUSTIN, USA**                                                      May 2020
*Master of Science in Operation Research and Industrial Engineering*            **GPA: 3.72/4.00**

**BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, PILANI, INDIA**              May 2017
*Bachelor (Hons.) of Engineering, Manufacturing Engineering*                        **GPA: 3.85/4.00**

## WORK EXPERIENCE

**UT CS - ARTIFICIAL INTELLIGENCE LABORATORY**                                          **Austin, TX**
*Graduate Research Assistant, Department of Computer Science, UT Austin.*       *June 2019 - Present*

- Developing an environment for implementing and testing various **multi-agent reinforcement learning** policies to study their effect on achieving pre-defined objectives
- Project involves integration of additional functionalities to several thousand lines of code in a scenario simulator

**WEIR MINERALS**                                                                                        **Bangalore, India**
*Graduate Engineer Trainee*                                                                          *Jan 2017 – Jun 2018*

- Developed and validated component scenario to reduce part tooling estimate by **20%** which resulted in the **annual savings of $730,000**
- Identified cost drivers in machine component design using the Product cost management platform
- Developed weekly report for the executives which helped discover actionable insights and **KPI's in Tableau**

## ACHIEVEMENT

- **Winner** of UT Austin's Data Hack 2019 organized by Microsoft Azure, Oracle and ML-DS group at UT Austin
- Published Machine Learning articles on Medium.com which garnered more than **10k+ views**

## PROJECTS

**PREDICTING CLICK-THROUGH RATE (CTR) FOR AN AD AGENCY**
*Algorithms Applied: XGBoost, Random Forest, LightGBM, Stacking*

- Developed machine learning model to accurately predict the number of customers visiting an Ad Agency
- Analyzed and processed data using various data visualization tools like Plotly, feature engineering tools and performed Hyperparameter tuning using Bayesian Optimizer
- **Ranked 6th** among a class of 400 students in the In-class Kaggle Competition achieving an AUC score of 0.944

**DETECTING THE ONSET OF MACHINE FAILURE USING ANOMALY DETECTION METHODS**
*Algorithms applied: k-Means Clustering, Isolation Forest, Auto Encoder, One-Class SVM*

- Built a model using a data-driven approach to Anomaly Detection for early detection of faults for a condition-based maintenance system
- Compared and evaluated several semi-supervised algorithms in terms of their F1 scores
- Successfully detected failures to address key issues in maintenance like safety and cost-effectiveness

## SKILLS/ COURSES

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|---|---|
| **Languages** | Python \| R \| Java \| SQL \| MATLAB |
| **Packages/ Technologies** | Keras \| TensorFlow \| Numpy \| Pandas \| Plotly \| Scikit-learn \| SciPy \| Spark \| MapReduce \|Seaborn \| Linux \| Version Control (Git) \| Tableau \| Shell Scripting |
| **Statistical Skills** | Regression \| Classification \| Clustering \| Dimensionality Reduction \| Hypothesis Testing |
| **Courses** | Data Science Lab \| Time Series Analysis \| Linear Statistical Models \| Applied Probability |