

SIDDHARTH GOEL

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EDUCATION

University of Pennsylvania | **MSE in Data Science (December 2021)** | GPA: 3.79/4.00

- **Coursework:** Machine Learning, Big Data Analytics, Deep Learning for Data Science, Computational Linguistics (NLP), Statistics for data science, Learning in Robotics, Time-series Forecasting Methods

University of Delhi | **BE in Information Technology (May 2012)** | GPA: 7.75/10

- **Coursework:** Programming Languages, Object Oriented Design, Algorithms and Data Structures, Database Systems

KEY SKILLS

- Python – PyTorch, NumPy, pandas, scikit-learn, matplotlib, seaborn
- SQL, NoSQL, MongoDB, Apache Spark

RESEARCH EXPERIENCE

Computer Vision/Perception in Robotics, Visual navigation

- Pursuing a [master's thesis](#) on navigation of agents in [3D indoor environments](#) to perform tasks such as point goal and object goal navigation under the guidance of [Kostas Daniilidis](#) and [Georgios Georgakis](#).
- Performed a study of the various sub-components (map prediction, goal selection, navigation) of training an autonomous agent to navigate to different objects in an indoor environment.
- Improved IoU and F1 score metrics for object detection by changing the loss function with Focal Loss, incorporating an LSTM layer in the network, and fine-tuning the weights for different components of the loss objective.

INTERNSHIP

Amazon, Seattle, US | Applied Scientist Intern

May 2021 – Aug 2021

Supply Chain Optimization Technologies (SCOT) - Fulfillment Optimization (FO) | *Python, pandas, SQL*

- Designed and evaluated a novel forward-looking sampling strategy for Amazon's order fulfillment simulation engine.
- Incorporated demand forecast by clustering methods to produce samples representative of future demand.
- Improved the accuracy and WAPE metrics for simulations by 30%.

BharatPe, New Delhi, India | Data Science/Machine Learning Intern

Jul 2020 – Dec 2020

#Series_C_Indian_Fintech_Startup, #Digital_Payments, #5.5M_merchants, #45M_monthly_transactions

- **Predicting Merchant Business Category** | *Python, pandas, scikit-learn, SQL*
Developed a predictive model to identify the merchant's business category - food & beverages, fuel, consumer goods etc., contributing to **2% revenue increase** by running targeted marketing campaigns and promotional offers.
- **Identifying Money Leakage** | *Python, pandas, SQL*
Built and conducted experiments to verify all the incoming and outgoing payments reconciliation for all product lines, proactively **preventing potential bottom line impact** by checking money leakage and future cost in audit disputes.
- **Daily Settlement Ratio** | *Data Mining, Python, pandas, SQL*
Improved the daily payment settlement ratio by identifying users having dysfunctional accounts for reasons such as blocked/frozen accounts, limit exceeded etc. using pattern recognition in recent historical transactions, **increasing user retention by 5%**.

ACADEMIC PROJECTS

- **US Traffic Accidents** | *Predictive Analytics, Python, scikit-learn, matplotlib, seaborn, Spark* | [\[Github Repo\]](#) **Apr 2020**
Built the complete data science pipeline by performing extensive exploratory data analysis, data pre-processing, feature engineering, and data modelling on about 3 million records of the [US Traffic Accidents dataset](#).

PROFESSIONAL EXPERIENCE

Deloitte Consulting (US-India) | Technology Consultant

June 2012 – August 2019

- **Preventing payment disputes:** Built a classification model using random forest algorithm to predict payment disputes on open invoices, decreasing the effort in consolidation of payments at quarter end by 30% and **reducing bottom-line impact by 25%**.
- **Inventory replenishment:** Developed novel solution to forecast demand from customers' buying trends using croston algorithm and SAP Predictive Analytics Library (PAL), **reducing material stock-outs by 95%** and adding 15% to top-line.
 - o The ML solution is estimated to generate revenues worth \$10M+ for Deloitte.