# MANASA HARIHARAN
**Data Scientist**
e-mail: manasa.95.27@gmail.com
LinkedIn: www.linkedin.com/in/manasa-hariharan

Phone: +17739876876
Github: https://github.com/manasahariharan
Website: https://manasahariharan.github.io

## WORK EXPERIENCE

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**Capital One**                                                                                      Sept 2022 – Present
Principal Data Scientist
- Developed algorithms for Diff-in-Diff and Synthetic Control analysis on credit card data to help commercial banking teams understand impact of interventions on merchant metrics, leading to 3 new client deals.
- Implemented advanced outlier detection algorithms and integrated them into a data processing pipeline for financial datasets using Kubernetes, Airflow and Apache Spark, built dashboards to help track data quality.
- Developed a text summarization model using open-source LLM algorithms to distill potential commercial bank deals information from diverse data sources. Evaluated and selected the most effective LLM algorithm through comprehensive metric comparisons.

**SullivanCotter Inc.**                                                                              Aug 2019 – Sept 2022
Data Scientist
- Built propensity models using product subscription data to predict the probability of clients subscribing to product offerings. Used causal inference methods to suggest ways to cross-sell and improve marketing.
- Used multi-Classification machine learning algorithms in Python to automate Healthcare Specialty matching for over 400k employees across Organizations, reducing over 20 hours of team labor every month.
- Partnered with Product Managers to conduct A/B tests on survey interfaces to increase survey completions resulting in over 7% increase in responses for Employee surveys conducted at top healthcare organizations.

**Data Science Intern**                                                                              May 2018– Aug 2018
Bayer Crop Science
- Analyzed seed data and identified factors contributing to experiments' success based on Classification Models.
- Analyzed experiment data to measure robustness of metrics used in seed experiments

**Teaching Assistant**                                                                               Jan 2018– May 2019
Teaching Assistant
- Taught Tutorial classes in implementing Optimization and Financial Modeling Algorithms using R and Python.
- Created assignments to help students understand optimization techniques in Machine Learning models.

## SKILLS

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- Python (NumPy, Pandas, PyTorch, Tensorflow,Scikit-Learn), R,  C++, Matlab
- SQL, Snowflake, Hive, Spark, Kubernetes, Tableau, JIRA, Git, AWS, Docker, AirFlow
- Natural Language Processing(NLP), Optimization, Large Language Models, Transformers

## PROJECTS

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**Very Deep Convolutional Networks for Text Classification**
Implemented a cutting edge Deep Learning algorithm on four public NLP classification datasets and compared their performance against state-of-the-art LSTM networks

## ADDITIONAL ACTIVITIES

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**DataKind – DataCorps Volunteer**                                                                   Jan 2022 - Oct 2022
Helped non-profit Kiva to quantify the impact of their lending program with survey analytics. Used the BERT model  to understand factors that contribute to successful Borrower profile stories on Kiva Lending platform.

## EDUCATION

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**University of Illinois at Urbana-Champaign,** Champaign, IL                                         Aug 2017 - May 2019
MS in Statistics, GPA: 3.85/4.0
**SASTRA University**, Thanjavur, India                                                               July 2013 - May 2017
Electronics and Communication Engineering, GPA: 7.4/10.0