

# SOMANG (SO) HAN

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## EDUCATION

**University of Pennsylvania** | Master of Science in Engineering in Data Science

Philadelphia, PA | May 2022

**St. Olaf College** | Bachelor of Arts in Mathematics & Statistics, GPA: 3.8/4

Northfield, MN | May 2018

## SKILLS

- **Programming Tools:** Python, R, SQL, Excel, SAS, Tableau, Hadoop, AWS, HTML, CSS
- **Technical Skills:** Data Analytics, Data Visualization, Data Mining, Predictive Modeling, Machine Learning, Deep Learning, Big Data Engineering, Statistical Analysis, Customer Analytics, Fraud Analytics

## PROFESSIONAL EXPERIENCE

**University of Pennsylvania**

Philadelphia, PA

*Data Manager, Penn Online Learning Initiative (OLI)*

Aug 2020 – Present

- Analyze Penn MOOCs data for 8 million enrollment on Coursera to uncover trends and provide recommendations
- Work collaboratively with OLI's Director of Operations to manage MOOCs database through Quick Base, Salesforce applications and retrieve data using SQL to create quarterly reports for tracking key metrics in OLI's growing portfolio

**Bluestem Brands, Inc.**

Eden Prairie, MN

*Decision Scientist, Marketing*

Nov 2018 – June 2020

- Extracted millions of customer data across multiple platforms (Hadoop, SQL Server, SAS) and transformed large complex data to generate features for new customer acquisition and customer marketing models in Python
- Led a team of 2 to enhance a customer experience tracking tool in R Shiny and increased customer satisfaction of fingerhut.com by 10% in four months
- Built XGBoost ensemble models using Python on AWS to identify customer segments for direct mail marketing campaigns and improved the sales conversion rate by 15%
- Supported product managers with ad-hoc analysis and statistical analysis to enable data-driven decisions by brand leaders

**Amplifon, Inc.**

Minneapolis, MN

*Associate Data Analyst*

Sep 2018 – Nov 2018

- Consolidated annual budget reports for sales of Miracle-Ear products, validated metrics and KPIs by manipulation of complex Excel formulas and Pivot Tables, and improved the process efficiency by 5%

**ID Insight, Inc.**

Minneapolis, MN

*Data Scientist Intern*

June 2018 – Sep 2018

- Identified different types of bank fraud by K-Means Clustering in R; generated data visualization in Tableau; presented findings to C-level leadership
- Rebuilt a bank fraud detection model using Logistic Regression in R and improved model performance by 20%

**Center for Interdisciplinary Research, St. Olaf College**

Northfield, MN

*Statistical Consultant*

Aug 2017 – May 2018

- Utilized statistical techniques in R to provide recommendations to 2 to 3 students per week for their projects
- Conducted NSF funded research in Topological Data Analysis with 3 students and published research findings on a peer-reviewed journal (SIAM Undergraduate Research Online - DOI: 10.1137/18S017302)

## SELECTED PROJECTS

**Reducing Plastic Pollution in Oceans**

(Summer Project 2020 with U.S. Census Bureau)

- Developed digital tools to increase the public awareness of plastic pollution in oceans and utilized several metrics to alert one's plastic usage and encourage to make informed choices to reduce the growing threat of plastic pollution

**Elo Customer Loyalty Score Prediction**

(Kaggle Competition: Top 11%)

- Preprocessed 30,000 customer data and built ensemble models (XGBoost/LightGBM) to predict customers' loyalty score for Elo, one of the largest payment brands in Brazil

**Topological Data Analysis on Network of Game of Thrones**

(Summer Research 2017 at St. Olaf College)

- Examined Game of Thrones network map data by a Topological Data Analysis tool and implemented link analysis to closely look characters' betweenness centrality and degree centrality to find the most important community in the network map
- Presented results of the research at the Joint Mathematics Meetings (JMM) 2018

## ADDITIONAL INFORMATION

- **Leadership:** Ambassador @ Women in Data Science (WiDS) 2020, Sergeant at Arms @ Toastmasters International, Guest Speaker @ MinneFRAMA (Business Analytics Conference), Co-chair @ St. Olaf Korean Cultural Association
- **Kaggle Expert:** Kaggle is a community for practicing data science problems (my profile: [www.kaggle.com/somang1418](https://www.kaggle.com/somang1418))
- **Hobbies:** Alpine Skiing – I was in the South Korea Jr. National Alpine Skiing Team for 2 years, Baking – I like eating muffins