



# Sameer Shankar

*Data Scientist | BSc. Combined Major in Statistics and Economics*

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## Skills

**Languages:** Python, Java, R, MATLAB, Racket, SQL, Spark

**Web:** Canva, Adobe Premiere Pro, Adobe Lightroom, Adobe After Effects

**Tools/Frameworks:** Numpy, Pandas, Seaborn, Scikit-learn, Tensorflow, PyTorch, Non-conformist, Django, JSON, Heroku

**Competencies:** Data Cleaning, Data Validation, Data Visualization, Statistical Modelling, Regression Analysis

## Technical Projects

### Predicting Building Energy Consumption

01/22 – 04/22

- Trained ML models including Support Vector Machines, ElasticNet, XGBoost, LGBM Regressor, and Gradient Boost to get a competitive RMSE of 18.501 (Top 30 in Kaggle Leaderboards).
- Incorporated Hyperparameter Tuning, Principal Component Analysis, Correlation Analysis, KNN Imputation and Random Forest
- Utilized various complex Python libraries such as Numpy, Pandas, Seaborn, scikit-learn and Non-conformist

### Crime in Denver Neighbourhoods

11/21 - 12/21

- Used statistical concepts such as residual plots to transform variables in order to obtain lower RMSE and AIC values
- Developed model based on Adjusted- $R^2$  and Mallows's  $C_p$  as metrics, and validated the model using quantile-quantile plot in order to make our findings more robust

### Housing Prices in Vancouver

09/21 – 11/21

- Applied sampling survey theory to collect a simple random sample (SRS) and a stratified random sample of 50 students each at UBC Vancouver in order to compare on-campus rent against off-campus rent
- Obtained estimate for the average rent paid by UBC students ( $\approx$  \$1065 per month) and constructed a 95% Confidence Interval for the estimate, followed by an evaluation of the two methods of data collection

### Revenue Prediction Student Competition

09/21 – 09/21

- Won individual Kaggle competition using ML concepts including Supervised and Unsupervised Learning methods

### Patient Record for Hospitals

09/20 – 12/20

- A Java application that creates a patient's record at a hospital that works with associated classes, persists multiple JSON objects in a local database and allows users to save and load data through a GUI interface utilizing swing API. Deployed the application to Heroku.

## Economic Analysis

10/19 – 12/19

- Developed a Python application to visualize the average GDP, and other statistics for different types of Government from a given dataset

## Experience

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### Analyst

06/18 – 07/18

*Grant Thornton LLP*

- Studied BMI reports in order to understand the macroeconomic landscape of Uganda
- Assisted in a project which determined if Tata Motors should shift operations from Uganda to Kenya

### Tutor

02/22 – 05/22

*The Core Academy*

- Tutoring a student for AP board exams by teaching various micro and macroeconomic concepts

### Videographer

09/21 – 01/22

*DYNE*

- Pursued my passion of creating videos and graphic designs for a food promotion company with 500 users and 40+ new users weekly

## Education

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**Bachelor of Science: Combined Major in Statistics and Economics (3<sup>rd</sup> year)** Expected graduation: 2024

The University of British Columbia

### Relevant courses

- **Computer science courses:** Systematic Program Design, Software Construction
- **Statistics courses:** Intermediate Statistics for Applications, Probability Theory and Combinatorics, Maximum Likelihood, Regression Analysis, Sample Surveys, Design and Analysis of Experiments, Time Series and Forecasting, ML Techniques with Applications
- **Mathematics courses:** Calculus III, Linear Algebra, Applied Linear Algebra
- **Economics courses:** Game Theory

## Leadership / Volunteering

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**Greenbridge School of Open Technologies** - Student

06/18 – 07/18

- Python Certification
- Java Certification

**Uganda Model United Nations** - Delegate

12/18

- Best Delegate Award

**Reading to children** - Student

09-17 – 04/18

- Reading to underprivileged children at local school