# Shivam Badkas

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## EDUCATION

**University of Toronto** | Honours BSc. Double Major in Statistics and Global Health

**Vice-President, Veg Club**: Leader of a student group with 14 executive members and 1000+ general members

## EXPERIENCE

**Data Analyst** 2021 - Present

Liferoll | Toronto, Canada

- Created event tracking graphs, funnels, and models on MixPanel to visualise metadata from ~600 test clients
- Designed and analysed experiments to validate hypothesis for product to improve user engagement and retention
- Plotted and analysed trends to better understand user experience, diagnose flaws of tracking framework and create a list of recommended events to track, gain critical insight into fundamental drivers of user behaviours
- Prepared experiments around group games to optimise for the best games/highest engagement games feature to incentivize group chat activity which doubled stickiness (DAU/MAU) from 16% to 28%
- A/B tested group rolls feature which improved user engagement by 13% which overall drove user retention by *1.09, feature came to be fundamentally core to the product
- Coordinated task backlog with engineers across the stack in order to get the right analytics events tracked
- Provided oversight on analytics projects, utilised user feedback to provide recommendations to designers, created dashboards and reports for leadership, collaborated with engineers to ensure integrity of data pipeline

**Data Analyst** June 2020 - Dec 2020

GoalMogul | Toronto, Canada

- Created event tracking graphs, funnels, and models on Amplitude to visualise metadata from ~100 test clients
- Managed product analytics dashboard on Asana to create and organise tables which held detailed descriptions of product user tracking events and to organise analytics objectives and goals
- Added topics feature to improve user engagement by 11% which drove overall weekly user retention by 6%

**Research Assistant** June 2018 - September 2018

Stony Brook University, Shah Lab | New York, United States

- Co-authored "Comprehensive investigation of forelimb kinematics during overground locomotion in non-injured rats"
- Tested eleven live rat models on MotoRater to quantify gait cycles and determine baseline performance which allowed for comparison to post-treatment tests
- Analysed collected data in SIMI Motion Analysis to determine patterns of locomotion and interpret results of ~10 parameters which were present in the final paper

## PROJECTS (2022)

**Feature Selection for Diagnosis:** Using tumour dataset; determined which predictors were significant using visualisations, recursive random forests, SelectKBest, Recursive Feature Elimination, then used PCA for feature extraction

**Classification of Disease using sklearn and pandas:** Used Decision Trees, Logistic Regression, K-NN, and Random Forests to classify presence of disease. Used train_test_split to separate training data and used ROC curve/AUC to evaluate models

**Prediction of Medical Insurance Charges by Regression:** Predicted medical insurance costs of families by multiple predictors using linear regression, L1 and L2 regularisation using ridge and lasso regression, and random forest regressor

**Dimensionality Reduction using PCA and t-SNE**: Standardised MNIST 28x28 hand-written digit dataset and used PCA to find number of principal components that explain variance, then used t-SNE to visualise how local structure is preserved

**Classification with XGBoost:** Predict probability of child being accepted into nursery based on socioeconomic factors using data from 1980s Slovenia; tuned hyperparameters, k-fold cross validation, and ranked feature importance

## SKILLS

- **Data Science:** R, ggplot, dyplr, INLA, Python, pandas, numpy, matplotlib, sklearn, MySQL, BigQuery, HTML/CSS
- **Technologies:** AWS, Git, Excel, Amplitude, Unix, Jupyter, Tableau, PowerBI
- **Certifications:** Google Data Analytics Professional