

# Sky Allinott

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## EDUCATION

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### University of Alberta

*Masters of Arts with Honours, Economics*

**June 2022**

*Edmonton, AB*

### University of Alberta

*Bachelors of Arts with Honours, Honours Economics*

**September 2021**

*Edmonton, AB*

## WORK EXPERIENCE

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### City of Edmonton

*Business Analyst (Urban Planning and Economy), Student*

**May 2021 – September 2021**

*Edmonton, AB*

- Presented complex data and analysis in simple and engaging ways to varied audiences.
- Improved department forecasting by introducing machine learning methods for model selection.
- Implemented a script to efficiently update several forecasts at once.
- Quantified the positive impact to external stakeholders of the City's effort to improve service timelines.

### University of Alberta

*Graduate Teaching Assistant*

**September 2021 – April 2022**

*Edmonton, AB*

- Improved class instruction by presenting common class misunderstandings to the instructor.
- Communicated with students one on one about their grades on assessments.

### Government of Canada

*Citizenship Assistant*

**June 2019 – December 2020**

*Edmonton, AB*

- Improved application efficiency by implementing and maintaining a database of client requests and information.
- Represented the Government of Canada to the public during citizenship tests and ceremonies.

## PERSONAL PROJECTS

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### Predicting Edmonton Housing Valuations: XGBoost

*Python*

**June 2022**

[Project Link](#)

- Predicted housing valuations on a personally made dataset using an efficiently tuned XGBoost model.
  - Hyperparameter tuning done via successive halving for computational efficiency.

### Predicting Spotify Song Popularity

*Python*

**June 2022**

[Project Link](#)

- Utilised the Spotify API to pull track information and predict song popularity with machine learning models.
  - Compared XGBoost, RandomForest and OLS models, with XGBoost performing best.

## Predicting Spotify Song Popularity using Neural Networks

R

July 2022

[Project Link](#)

- Utilised tensorflow to create and tune a neural network to predict Spotify song popularity.
  - Utilised the Keras interface and tuned the network via early stopping and grid search.

## Forecasting Change in Stock Price

R

April 2021

[Project Link](#)

- Determined probability of a stock price increasing/decreasing the next day using time series cross-validation.
  - Utilised a logit model with price lags for a prediction and then bootstrapped a prediction interval.

## Predicting IBM Employee Attrition

R

April 2021

[Project Link](#)

- Compared predictive power of three machine learning models in determining employee attrition.
  - Classification models that compared XGBoost, RandomForest, and Lasso.

## Forecasting Canadian GDP

R

December 2020

[Project Link](#)

- Utilised the Statistics Canada API to gather data and forecast GDP.
  - Utilised R's built in auto arima function which utilises the AIC to determine optimal model.

## Tableau Dashboards

Tableau

[Tableau Portfolio](#)

- Employed Tableau to create various visually engaging and interactive data visualisations.

## ACADEMIC RESEARCH

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### Effect of LRT Expansion on Neighbouring Properties

Stata

June 2022

- Determined causal effect of new LRT stations on property value in Edmonton Alberta.

### Forecasting Aggregate Investment: Comparing Approaches

R

April 2022

[Project Link](#)

- Compared forecasting ability of a static theoretical investment formation equation to time series models.

### Price Effect of a Gasoline Cartel

R

February 2022

- Estimated damages and cartel period of a collusive gasoline market in Southern Ontario.

### Impact of Childhood Computer Access on Wage Determination

Stata

April 2022

- Measured the impact additional years of computer access as a child had on adulthood wages.

## AWARDS

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### **Graduate Teaching Assistantship**

**2021**

*University of Alberta*

- Awarded to select candidates of the Masters of Economics program based on outstanding scholastic standing.

### **Emerson and Tang Family Scholarship**

**2020**

*University of Alberta*

- Awarded to a student with superior academic achievement in Economics and has shown involvement in sports.

### **KD Verville Scholarship for Excellence in Economics**

**2020**

*University of Alberta*

- Awarded annually to a student with superior academic achievement entering their second, third, or fourth year of the Honours Economics program.

### **Gwendolyn Ewan Scholarship (University of Alberta, 2019)**

**2019**

*University of Alberta*

- Awarded for superior academic achievement to a student from the Northwest Territories.

### **Dean's Honours List**

**2018, 2019, 2020, 2021**

*University of Alberta*

- Presented to students possessing a 3.5 GPA or better on a full-time course load.