

# Eric Asare, Ph.D.

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| github.com/ericasare1

## SKILLS

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**Frameworks & Methods:** Causal Inference, Experimental Design, Time Series, Bayesian Econometrics, Machine Learning, Simulation, Geospatial Statistics, Demand/Price Analysis, Linear Algebra.

**Programming Languages:** Python, R, SQL, Git, STATA.

**Tools:** Functional Programming R, Object-Oriented Programming Python, Scikit-learn, NumPy, Pandas, PySpark, SparklyR, AWS, Tableau, R Shiny, StreamLit, Natural Language Processing, Big Data.

**Database:** PostgreSQL, MySQL, SQLite, MongoDB, Cassandra.

## EXPERIENCE

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**Postdoctoral Fellow, University of Saskatchewan, Canada**

**January 2018 - Present**

- Created a relational dataset on wetlands for multidisciplinary wetland research, using MySQL, allowing members in the group to access reliable wetland-related data for their research.
- Led my research team to design a choice experiment to understand agricultural producers' wetland conservation practices in the Canadian Prairies.
- Designed an R Shiny app (version 1) to allow agricultural producers in the Canadian Prairies to value wetlands on their lands using a Net Present Value Simulation method, to inform wetland drainage decisions.
- Identified a cost-effective wetland conservation policy in the Canadian Prairies using a Net Present Value Monte Carlos simulation model.
- Designed a meta-regression value model, using Bayesian linear and nonlinear mixed models, to estimate values of wetlands in the US and Canada.
- Predicted land assessment values in Alberta, Canada, using random forest and XGBoost with a prediction accuracy of 70%, which was used as a foundation to classify wetlands into agricultural drainage risks (high, medium, low) for targeted wetland conservation.

**Fellow, Insight, Toronto**

**May 2020 – AUGUST 2020**

- Developed a BeeSafe WebApp, using StreamLit and Poisson model, enabling agricultural producers in US counties to predict bumble bee diversity with features such as plant hosts, temperature, and precipitation, to inform sound bee conservation decisions at the farm level.
- Deployed StreamLit WebApp on Amazon Web Service (AWS) EC2 instance.

**Research Assistant, Texas Tech University, US**

**August 2015 - December 2017**

- Analyzed producers' adoption of precision agricultural tools and their sources of precision agricultural information in the southern US, using a two-stage logit and a nested logit model, respectively, in STATA and R, to inform precision agricultural machinery marketing.

**Research Assistant, University of Maine, US**

**August 2011 - May 2013**

- Applied a stochastic dominance model and Monte Carlos simulation in STATA and informed farmers, academics, and bee conservationists at producer workshops in Maine that increasing bee mortality in Maine could negatively impact the sustainability of intensive blueberry farms in Maine.

## EDUCATION

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**Texas Tech University** *Ph.D. in Agriculture and Applied Economics*

**August 2015 – December 2017**

**Virginia Tech University** *M.S. in Agriculture and Applied Economics*

**August 2013 – May 2015**

**University of Maine** *M.S. in Resource Economics and Policy*

**August 2011 – May 2013**

## HONOR / AWARD

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2017 Outstanding Ph.D. Student Faculty Award, Department of Agriculture and Applied Economics, Texas Tech