

Ruby Cheung

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Relevant Work Experience

Graduate Research Assistant

Seattle University, Seattle, Washington

June 2024 – Present

- Built and deployed NLP models to conduct a sentiment analysis on comments submitted to carnivorespotter.com.
- Cleaned and pre-processed unstructured text data.
- Implemented testing and validation procedures to ensure accurate results, currently at 76% accuracy.

Institutional Research Analyst

Wabash College, Crawfordsville, Indiana

November 2022 – Present

- Compile, organize, and analyze data to generate comprehensive reports for submission to state agencies and external entities.
- Conduct ad-hoc analytical reports for various departments across the college.
- Develop interactive dashboards tracking key performing indicators such as retention and completion rates.

Economic Research Specialist

June 2020 – August 2022

Department of Economics and Political Science, St. Catherine University

- Headed economics research teams on multiple research projects focused on development economics and labor markets primarily in North Africa and the Middle East.
- Conducted data analysis employing regression models, including multinomial, Logit, and Tobit models to predict employment rates.
- Created new census map for the country of Sudan using GIS software.
- Designed survey instruments using ODK-X for android-based data collection, integrating SQLite database functionality for seamless data management.

Technical Competencies

- Programming languages: R, Python, Stata, SQL
- Data analysis and visualization, database management, web scraping, machine learning.
- Technology/Frameworks: R-Shiny, QGIS, scikit-learn, TensorFlow, seaborn, Hadoop, Hive, Spark, MySQL, Tableau, AWS, NoSQL, Selenium, PyTorch, Matplotlib, MongoDB.

Education

M.S in Data Science, Seattle University

Anticipated Graduation May 2025

BS in Economics, St. Catherine University

May 2020

Projects

Carnivore Spotter sentiment analysis | June 2024 – Present | Python, TensorFlow, NLP, TextVectorization

- Using unstructured data, conducted feature preprocessing and vectorization
- Built an NLP to conduct sentiment analysis on user submitted comments, project in progress

Bird call recognition | May 2024 - June2024 | Python, TensorFlow, h5py, librosa

- Converted audio files to usable spectrographs of identified bird calls to train models
- Built a CNN classifier to identify a set of bird calls from recorded audio files (70% accuracy)

Selected Publications

- Caroline Krafft, **Ruby Cheung**, and Ragui Assaad. 2022. "Introducing the Sudan Labor Market Panel Survey." Cairo, Egypt: *Economic Research Forum*.
- Caroline Krafft, Ragui Assaad, Mohamed Ali Marouani, **Ruby Cheung**. 2021. "The Impact of COVID-19 on Middle Eastern and North African Labor Markets: Vulnerable Workers, Small Entrepreneurs, and Farmers Bear the Brunt of the Pandemic in Morocco and Tunisia." Cairo, Egypt: ERF.