CHARLOTTE SWAVOLA

9 Agnes Villas, Nottingham, UK   (+44)7445 020936   CGSwavola@gmail.com

https://www.linkedin.com/in/charlotte-swavola/   https://cswavola.github.io/

Data Scientist from an engineering background with a focus on efficient yet thorough project design and analysis. Creative implementation of algorithms with an understanding of the hard-to-capture variables. Driven to deliver representative findings through quality data and statistically robust analytics.

PROJECTS

Voulez Vous du Vin?   **R**

Design, launch, and analysis of a multifactorial advertising experiment to evaluate the impact of foreign language marketing on perceived value of wine. Statistical analysis and Hypothesis testing using randomization inference, robust linear regression and binary logistic regression models.

Whether to Cycle   **Python**

Forecasting bike rental demand in the Capital Bikeshare program in Washington, D.C. using regression and machine learning. Feature transformation and implementation of regression, regularization, and classification models using Scikit-learn, Pandas, and Tensorflow.

Economics of a Hurricane   **HTML/CSS/JS, Python, SQL**

An interactive visualization of the economic effects of Hurricane Katrina on the counties of New Orleans. Presents an overview of gentrification, interactive dashboard with by-county analyses and methodology details. Analysis performed using API's to process geographic data.

Live Tweet Analysis Pipeline   **Python, SQL**

Development of a basic pipeline tool launched through an Amazon EC2 instance to gather and perform live analysis on tweet content. Pipeline uses Apache Storm, Amazon EC2, Twitter API, Streamparse, Postgres, PsycoPG, and Tweepy.

Social Characteristics

Proposed framework for the design of privacy experiments in a social network setting and interpretation for experiments from multiple privacy contexts (retail, health, etc.) in order to apply their methodology or findings to social network privacy studies.

EDUCATION

Master of Information and Data Science   Projected Graduation **Mar. 2019**

University of California, Berkeley

Bachelor of Arts, Chemistry   **May 2013**

Temple University

Director's Honor Roll; Temple Lacrosse, Division I, Atlantic 10 Conference

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TECHNICAL SKILLS

- Experimental design, implementation, and statistical analysis for causality testing using randomization inference, linear regression, and binary logistic regression models
- Predictive modelling and forecasting through supervised/unsupervised machine learning using Scikit-learn, Pandas, and Tensorflow.
- Application of classification models including K-nearest neighbors, naive-Bayes, decision tree, random forest, and gradient boost models.
- Big data and cloud supported query and analysis including pipeline construction and data lake management
- Data visualization, dashboard development, and analysis presentation
- Natural language processing including POS tagging, sentiment spectrum analysis, and assembling deep learning algorithms
- Privacy framework classification for experimentation design and user policy impact analysis
- Data and analytics tools/languages: Python, R, SQL, SAS, Hadoop, Hive, Spark/Pyspark, Spark, PySpark, Scala, Tableau, JS/CSS/HTML, Google Analytics, Amazon Web Services
- Project management including risk analysis and asset management, team coordination using agile framework, stakeholder presentations, and project planning software
- Experience in scientific and academic writing
- Conversational Spanish

EXPERIENCE

Photovoltaic Laboratory Coordinator   **Oct. 2016 – Sept. 2017**

Heraeus Photovoltaics, Conshohocken, PA, USA

- Managed KPI dashboards including collection and analysis of efficiency data to identify improvement targets
- Coordinated laboratory activities in a research environment including resource and facility management and process improvement
- Implemented continuous improvement using the 5S/Kaizen lean manufacturing principles
- Conducted SEM analysis of photovoltaic samples

Quality Control Supervisor   **Mar. 2015 – Oct. 2016**

Johnson Matthey ECT, Inc., Wayne, PA, USA

- Supervised multiple chemical and engineering testing laboratories to conduct production analysis of catalytic converters
- Developed a team of employees and manage documentation and testing databases

Process Development Technician   **Dec. 2013 – Mar. 2015**

Johnson Matthey ECT, Inc., Wayne, PA, USA

- Engineered coating methods for catalytic converter prototypes