Christopher Sparling

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Skills

Languages	R, Python, SQL, C++
Libraries	tidyverse, keras, caret, scikit-learn, numpy, scipy, pandas, beautifulsoup
Tools	git, SSMS, Linux, Command Line
Familiar With	Azure, classification, regression, RESTful APIs, AWS, web development

Work Experience

Litens Automotive Group
Jan – Dec 2018

Business Analyst / IoT Developer – Vaughn, Ontario

- Developed PoC **IoT** data pipeline for predictive analytics initiative aimed at reducing machine downtime and increasing maintenance team effectiveness
- Migrated KPI visualizations from legacy system to **Power BI** with **Azure**, redesigning data storage solution to improve performance in new platform

Karat
Aug 2017 – Present

Code Grader – Remote [Seattle, Washington]

- Oversaw manual and automatic testing of **1000+** code submissions in languages such as **Python**, **R**, and **SQL**
- Prototyped automatic spreadsheet data entry tool using the **Google Sheets API** and Python

Climax Media
Sept 2016 – Dec 2016

QA Automation Co-op – Toronto, Ontario

- Planned and executed manual and automatic testing in Agile teams, utilizing **Github** and **git** to manage issues
- Tested and loaded large-scale CMS using **SQL** and **DB2** for high-end automotive client

Concord Screen
Jan 2016 – Apr 2016

Mechanical Engineering Co-op – Newmarket, Ontario

- Operated as scientific **research lead** and oversaw preliminary redesign of company product, taking the project from infancy to testing various prototypes

Education

B.ASc. - Mechatronics Engineering
2015 – 2020

University of Waterloo

Notable Projects

Bimodal Gender Predictor Based on Personality

- **Rmd** notebook-based project that takes in the ~20k personality assessment responses, training and scoring various machine learning algorithms such as **MDA**, **SVM**, and **kNN**
- Analyzes variations in personality between men and women, and by race
- Enables users to complete quiz themselves and generate predictions from the assorted models

MMA Combo Assistant

- Built with Python, generates random sets of combos from pre-defined choices then reads them out with artificially generated speech files
- Widely configurable; everything from round length, to moves included in the set, to break length

Pokémon Dataset Analysis

- A **Jupyter notebook** based data analysis of hosted dataset using **R**'s **ggplot2** and additional **tidyverse** packages as visualization and data cleaning tools
- Explores spread of stats across the various primary and secondary types and correlation between stats
- Predicts highest stat based on type combination

Classification Algorithm Comparison

- An RMd notebook with exploratory analysis, cleaning and visualization of Wisconsin Breast Cancer [Diagnostic] Dataset
- Uses **caret**, **corrplot**, and **tidyverse** to compare accuracy, precision, and recall of various ML classification algorithms including Naïve Bayes, kNN, Random Forest, SVM, and Decision Tree

Independent Coursework

Data Scientist with R
by DataCamp — Certificate #10131

Inferential Statistics, Bayesian Statistics
by Mine Çetinkaya-Rundel — [In progress]

Big Data Specialization
by UC San Diego Staff — [In progress]