Patrick J. **Lestrange**

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Skills

Programming	Python, Fortran77/90, C++, LaTeX, Shell Scripting, SQL, Perl, Javascript
Tools	Tensorflow, CatBoost, Scikit-learn, Flask, Docker, Elasticsearch, Tesseract
Data Science	Generalized Linear Models, Deep Learning, Natural Language Processing, Computer Vision, Optical Character Recognition, Web Scraping

Experience

Convoy
Seattle WA

Research Scientist
Sep. 2019 - present

- Deployed a regression model to predict when a driver will arrive at a facility, improving predicted ETA accuracy by 25%.
- Deployed a model to determine whether we're tracking the correct driver on a shipment, reducing incorrect driver tracking by 80%.

Boeing
Seattle WA

Data Scientist
Aug. 2018 - Aug. 2019

- Trained an object detection model (Faster R-CNN) implemented using tensorflow to identify 9 different classes of symbols in engineering drawings. Created synthetic training examples to overcome class imbalances and improve model generalization.
- Applied classic image processing techniques and open-source optical character recognition models to interpret text in engineering drawings.
- Deployed these models in a continuously running docker container that receives messages from and send results to a kafka server.

Insight Data Science
Seattle WA

Fellow
Jan. 2018 - Jul. 2018

- Built Gefilter Fish, a Chrome extension to cluster Amazon reviews into topics and reduce redundancy by greater than 15% compared to a current feature on the website.
- Designed an interface to display these topics when viewing a product on Amazon's website. It also returns summaries of the reviews focused on that topic.
- Performed sentiment analysis using a database of 1.7M reviews to determine the perception of specific aspects of a product.
- Used Python, Javascript, SQL, web scraping, and natural language processing techniques such as lemmatization, tf-idf, and non-negative matrix factorization.

University of Washington
Seattle WA

Graduate/Postdoctoral Researcher
Sep. 2012 - Dec. 2017

- Developed an algorithm to describe how molecules interact with X-ray lasers. This technique was up to 1000 times faster than previous approaches and is now available in the commercial software package Gaussian16 (Fortran77).
- 13 peer-reviewed publications, 5 oral presentations, 4 conference posters.

Education

University of Washington
Seattle, WA

Ph.D. in Physical Chemistry
Sep. 2012 - June 2017

York College of Pennsylvania
York, PA

B.S. in Chemistry
Sep. 2008 - May 2012