

K. Ryan Harper

Data Scientist Bringing Mixed-Method Research Solutions to Business Technology

Tools: Python (sklearn, statslab, nltk), R (statsr, ggplot), SQL (postgresql), Excel, JS, graphviz, Spark, shell scripting

Platforms: Linux, Mac, PC, Docker, plotly, Chartjs, AWS, Matlab

Pipeline: data architecture, querying, preprocessing, analysis, predictive modeling, presentation, visualization

Specializations: ETL, supervised/unsupervised learning, forecasting, natural language processing, big data

Professional: academic research and writing, project management, trilingual

Work History

Social Network Analyst

03/19 - 03/19

Safe to Sleep[®] via D'EVA Consulting

- Discussed with D'EVA Consulting impressions of data and options for analysis, while providing technical recommendations and writing algorithms for ingesting and visualizing categorical data
- Created network graphs, associated metrics, and brief narrative to interpret key findings from analysis

Data Science Consultant

01/19 - Present

via Upwork.com

- Ingest, clean, and process YouTube data sourced by the client while performing exploratory data analysis
- Weekly check-ins with clients to answer questions and to make sure projects are meeting expectation

Program Assistant & Office Assistant

12/16 - 04/17

International Special Programs, PSU, Portland, OR

- Coordinated with teachers, host family, program organizers, and tour guides to solve logistical issues

English Instructor

03/13 - 07/17

GoFluent, Portland, OR

- Hosted 90-minute workshops for business ESL on team management and persuasive communication
- Taught vocab, grammar, and pronunciation to employees in senior level positions at international companies

Graphic Design Intern

01/12 - 11/12

PNW Tax School, Beaverton, OR

- Front-end graphic design for website (HTML, JS, CSS)
- Video post-production edits of tax education videos (Adobe software)

Junior High School and Elementary School English Teacher

08/08- 08/11

Japanese Exchange and Teaching Program, Kamiichi, Toyama, Japan

- Employed very strong multi-tasking and problem-solving skills every week: Created materials, wrote tests, graded work, taught 18-25 classes, studied Japanese, and prepared students for speech competitions

Recent Projects

Data Science Coop Platform

Currently building remote containers with postgresql, Docker, and AWS for community-based big data analytics

Bosch Manufacturing Network Visualization

Designed directional graphing algorithm for visualizing Bosch's manufacturing line according to failure rate

PDX Bike Accident Time Series Forecasting

AR, ARIMA, SARIMAX modeling and visualizations of Portland bike accidents with 2017 accident forecasting

Community Projects

DataOps Lead Contributor (*Nectar Collector*)

Portland, OR

11/18 - Present

- Created postgresql, jupyter, Docker containers remote hosted on DigitalOcean droplets and accessed by SSH
- Coded crawlers for Reddit and Twitter pushed to postgresql database in Python and SQL
- Data science: forecasting, network/dashboard visualization, natural language processing, big data framework

Contributor (Portland Data Science Meetup)

Portland, OR

07/18 - Present

- Innovated, scraped, and cleaned OCR Historical Chinese Character data set for image analysis unit
- Co-hosted Data Science Meetup for Image Analysis of Historical Chinese Characters

Participant (Portland Data Science Meetup)

Portland, OR

01/18 - Present

- **PDOT Forecasting:** Completed predictive linear regression model for 2016 fatal car accidents
- **Portland Trimet:** Created data visualizations of trends in trimet stop delays per route
- **US Natural Disaster Patterns:** Created geoplots of weather patterns to find natural disaster hotspots
- **Sector ETF Forecasting:** 2017 ETF forecasting using macroeconomic indicators and trend analysis

Contributor (GapML)

Portland, OR

07/18 - 12/18

- Developed tutorial using data set in Keras and GapML
- Face-to-face meetings, unit testing with pytest, pull requests, discussions on improving algorithms

Hosted Workshops

Image Analysis of Chinese Characters (Portland Data Science Meetup)

11/18 - 12/18

- Presented on image analysis, the Chinese language, and group project organization strategies

Bike Accident Forecasting (Thinkful)

10/18

- Presented capstone of time series regression analysis of bike accidents to Thinkful students
- Provided technical explanation of methodology, hyperparameter tuning, and scoring

Data Science in ESL (Thinkful)

06/18

- Presented on model-based predictions of first language (Chinese/Japanese) derived from English syntax

Education

Data Science Certificate Program

04/18 - 10/18

Thinkful

- Data Science capstones: Inferential analysis, supervised, unsupervised, reinforcement learning, forecasting
- Mentored by data science professionals in the industry to apply work-appropriate methods to data science

Full Stack Certificate Program

11/17 - 03/18

PDX Code Guild

- Created full stack app in Django with postgresql database hosted by AWS (Python, HTML, JS, CSS, SASS)

MA TESOL

Portland State University

08/15 - 06/17

GPA: 3.89/4.0

- Courses: Research and Design, Methods, Statistics, Syntax, Phonetics, Phonology, Cognitive Linguistics
- ERW Research Paper on international student motivation and curriculum design MA project