

Ryan Harper

Data Science

Skills

Pipeline: data architecture, data querying, data preprocessing, predictive modeling, generative modeling, decks/presentations

Specializations: forecasting, natural language processing, big data, neural nets, database architecture, data scraping

Languages: Python (sklearn, statslab, nltk, regex, Keras, hadoop), R (statsr, ggplot), SQL (Postgresql, sqlite), JS, HTML, Django

Professional: near-native fluency in Chinese and Japanese, curriculum design, mentoring, workshops, English grammar/syntax

Capstone Projects

Blockbuster Gross Profits Exploratory Analysis Capstone [Thinkful]

Innovated process and implemented model for maximizing profits of blockbuster movies via genre analysis

Heart Disease Classification Capstone [Thinkful]

Successfully identified heart disease by classification to improve early detection method for diagnosing heart disease

Word2Vec Ratings Clustering Analysis [Portland Data Science]

Visualized and implemented sentiment clustering via Word2Vec analysis of online product reviews to identify successful products

Open Source Projects

NLP and DataOps Lead Contributor

Portland, OR

Nov 2018 - Present

- Created a Postgresql database to be accessed via SSH and hosted in Digital Ocean
- Wrote crawlers for Reddit, Twitter, and Quora
- Working with a team to develop a comprehensive sentiment analysis model useful for monitoring consumer products
- Data science approach will include forecasting, network analyses, natural language processing, and big data
- Weekly online meetings with 5-15 members: Discussions on NLP, Dataops, and Clustering Analyses

Gap-CV Contributor

Portland, Oregon

July 2018 - Present

- Developed notebook tutorial for pushing OCR data set into Keras NN with Gap-CV
- Weekly face-to-face meetings, unit test with pytest, and pull requests

Portland Data Science Meetup Contributor

Portland, Oregon

Jul 2018 - 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

Portland Data Science Meetup Participant

Portland, Oregon

Jan 2018 - Present

- PDOT Forecasting (Jun-Jul): Accomplished predictive polynomial linear regression model for 2016 fatal car accidents
- Portland Trimet Schedule (May-Jun): Created data visualizations of trends in trimet stop delays per route
- US Natural Disaster Patterns (Apr-May): Created geoplots of weather patterns to find natural disaster hotspots in the U.S.
- Sector ETF Forecasting (Mar-Apr): Accomplished 2017 sector ETF forecasting using 2017 macroeconomic indicators

Hosted Workshops

Image Analysis - Chinese Character Recognition [Meetup.com]

Nov 2018 - Dec 2018

- Co-hosted four meetups at Portland Business Accelerator with 20-40 weekly attendees
- Gave introductory presentations on image analysis, the Chinese language, and group project organization strategies

Forecasting Workshop [Thinkful]

Oct 2018

- Presented capstone on Regressive modeling of bike accidents in Portland, Oregon to create a baseline prediction model

Data Science in ESL Workshop [Thinkful]

Jun 2018

- Presented capstone on using data science for English language learning applications
- Designed model-based predictions of students' first language derived from language syntax structure

Work History

Program Assistant & Office Assistant

Dec 2016 - Apr 2017

International Special Programs, PSU, Portland, OR

- Created a curriculum for new elective course: Includes lesson plans and accompanying materials
- Coordinated between teachers, host family, program organizers and bus drivers to ensure events stay on schedule

English Language Trainer

Mar 2013 - Jul 2017

GoFluent, Portland, OR

- Lead 90-minute workshops for business ESL on team management, persuasive conversation, and business presentations
- Structured grammar and pronunciation instruction for clients in Europe, South America, the Middle East, Africa and Asia

Graphic Design Intern

Jan 2012 - Nov 2012

PNW Tax School, Beaverton, OR

- Front-end graphic design for website (HTML and JS)
- Created weekly Tax School newsletter (including layout, content, and design)
- Post production on 20 webcast/webinar videos for PDX Tax School

Junior High School English Teacher and Assistant English Teacher

Aug 2008- Aug 2011

Japanese Exchange and Teaching Program, Kamiichi, Toyama, Japan

- Designed and implemented English grammar lessons for 7th-9th grade students (around 15 classes per week)
- Led special sessions on effective communication strategies, cultural miscommunication, slang, etc.

Elementary School Teacher

Aug 2008- Aug 2011

Kamiichi Town Hall and Board of Education, Kamiichi School District

- Created syllabi for the English courses at each of six different elementary schools in Kamiichi
- Frequent communication with 30+ native Elementary teachers and more than 800 students each year

Education

PORTLAND STATE UNIVERSITY*MA Degree - TESOL*

Sep 2015 - Jun 2017

GPA: 3.89 / 4.0

- Core Topics: Syntax, Phonetics, Phonology, Cognitive Linguistics, Research and Design, Methods, Language Acquisition
- Specialized in curriculum assessment and curriculum design for ESL and EFL corporate/public institutions

THINKFUL

Apr 2018 - Oct 2018

Data Science Certificate Program

- Completed 5 Data Science capstones using statistical analyses, supervised/unsupervised learning, and the research method
- Mentored by a data science professional to understand industry standard practices and standards

PDX CODE GUILD

Nov 2017 - Feb 2018

Full Stack Certificate Program

- Coded in JS, Python (PEP8 coding standards), HTML, CSS, Django, and Github for group and individual projects
- Created full stack ESL blog themed website with PostgreSQL database for backend hosted by AWS

DEPAUW UNIVERSITY*BA Degree - EAS*

Aug 2004 - Jun 2008

GPA: 3.41 / 4.0

- Emphasis on Chinese language, Asian economics, and language education
- Media Fellows Alum: 3 year co-producer of a prestigious college news show