Christina Wayman PhD

Data Scientist

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Skills

Technical Languages

Bash • Python • HTML • Matlab • SQL

Libraries & Tools

Pandas • NumPy • Sci-kit learn • Flask • BeautifulSoup • Selenium • NLTK • Seaborn • Matplotlib • Git & version control • MongoDB • Postgres • AWS • Google Cloud

Machine Learning

Regression Modeling • Classification Modeling • Natural Language Processing • Clustering • Dimensionality Reduction • Unsupervised Learning • Neural Networks • Transfer Learning

Foreign Languages

Conversational - Spanish, French, Greek

Education

King's College London, UK

PhD in Neurobiology　　　**2012-2017**

- Thesis entitled "Neurotrophin-3 as a promoter of spinal cord plasticity in the distal middle cerebral artery occlusion model of stroke".
- Taught tutorials, assessed coursework, assisted in lab practical classes, and supervised undergraduate lab projects.
- Awarded Japanese Society for the Promotion of Science (JSPS) and British Council scholarship, in addition to the George Brownlee award, given to a Pharmacology student.
- Awarded a Lion's Den Entrepreneurial Award for "Best Idea".

King's College London, UK

BSc Pharmacology & Molecular Genetics　　　**2007-2011**

- Modules included Human genetics, Biostatistics, Psychiatric diseases.
- Final year project entitled "TRP channels in sensory neurons".

Publications

Wayman C, Duricki DA, Roy LA, et al. Permanent distal middle cerebral artery occlusion in elderly rats causes sustained sensorimotor disability and medium-sized cortical infarcts.
J Vi Exp (2016); **108:** e53106 doi:10.3791/53106

Fun facts

- Winner of Lion's Den Business award (£10,000) for Best Idea (2014) for a digital health intervention using a game to develop predictive markers of developing Parkinson's disease.
- Summited Aconcagua, lived in Japan, and love everything theatre.

Summary

Passionate about the application of Data Science for driving change in social issues and healthcare. Strong desire to derive actionable insights from data and combining a past academic career with data science. Have led several podcasts, spoken at worldwide conferences, and have participated on panels exploring the future of Digital Health.

Experience

Metis　　　2020
Data Scientist

- Completed an immersive data science ACCET-accredited boot camp focused on machine learning, Python, statistical modeling, visualization, and project design. Projects include:

The Gownfinder: a wedding dress recommender

Built a recommender tool to identify wedding dresses when given an input image through the use of a convolutional neural net. Principal component analysis reduced the number of features and cosine similarity was measured to identify the most similar gowns in the dataset, which was made up of 1700 scraped images. Built a Flask app as a dashboard to communicate findings, with filtering for price.

NLP Disaster Prediction from Twitter data

Retrieved and cleaned 100,000 tweets and performed topic analysis with the aim to identify tweets related to disasters. 100+ topics were composed using whose word matrix included typhoons, earthquakes, and wildfires.

FDA Medical Device Recall Classifier

Built a classifier that could determine whether a medical device was likely to be recalled based on key features from the OpenFDA API as well as engineered features from previous adverse event data. The classifier identified medical specialties and devices types with a high positive predictive value using logistic regression and a random forest classifier.

2020 Board Game Predictions

Analyzed features of popular board games to predict emerging themes and categories of games using a linear regression model. Data were scraped from the web using Selenium.

The Lancet Journals　　　2016 - 2019
Senior Editor, The Lancet Digital Health

- Launched the new journal on the convergence of digital technologies with health, healthcare, and society.
- Developed a voice for the journal through regular editorials and managing social media strategy, building more than 5,200 followers in 12 months.
- Attended conferences, meetings, and outreach events, expanding the reach of the journal.
- Responsible for evaluating manuscripts of original research for 75% of journal content, completed peer review, and edited accepted manuscripts while working to tight deadlines.

Senior Editor, The Lancet Psychiatry

- A journal providing psychiatry clinicians with practice-changing research. Screened and reviewed research articles and reviews, accepted articles for the journal, and wrote editorials alongside other team members.
- Managed the Features, Profiles, and Research Roundup sections of the journal, and launched a section called" A letter from…", which aimed for researchers to provide first-hand accounts of psychiatric care in low-to-middle income countries.

Senior Assistant Editor/Assistant Editor

- Copyedited articles across all journals, with attention to detail, effective communication, and working to tight publishing deadlines.

King's College London, Wolfson Centre for Related Diseases　　　2011 - 2012
Research Assistant

- Experimental strategy, and laboratory organisation and management.