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70A Christchurch Rd
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SW2 3DE

Skills

Python	HPC	Machine learning
Postgres/SQL	R	ggplot
PostGIS	Simulation	Javascript/React
Numpy/SciPy/Pandas	Agent-based modelling	Data engineering
Jupyter	Statistics	Software development
Java	Survey data	Data science
CDR	Version control	Visualisation

Education

09/2012-09/2016

PhD Complex Systems Simulation and Social Statistics, University of Southampton, Southampton

09/2009-07/2012

BSc Computer Science with Artificial Intelligence (1st), City University, London

Experience

2016-current

Data Analyst & Developer, Flowminder Foundation

Analysis of telecoms and population data. Extensive use of Postgres and PostGIS for analytical work, often in time sensitive conditions. Lead developer for numerous analytical, data pipeline, and web based visualisation tools.

2012-2016

Teaching Assistant, University of Southampton

Worked as a teaching assistant on both introductory statistics, and Python courses, supporting undergraduates' learning.

2010-2012

Technical Support, Communications International Group (Part-time)

Supported day-to-day operations at a busy publisher by troubleshooting PC/OSX and hardware issues; managing Server 2003/Exchange system and liaising with third-party contractors/suppliers. Delivered integrated OSX/Windows login system, WiFi installation, desk-side user training, onsite backup solution, and developed an in-house expenses reporting tool using Python/Django.

Software

flow-do

An experimental dependency based todo list/project planning tool, inspired by Sankey diagrams, written in Javascript/HTML.

<https://github.com/greenape/flow-do>

Pullbot

Small tool for managing GitHub pull requests.

<https://github.com/greenape/pullbot>

SSCC Temporal Difference Simulator

A Java simulator for the extended Temporal Difference model of associative conditioning, with GUI.

<https://github.com/cal-r/sscctd>

Publications

Gray, J., Hilton, J., Bijak, J. (2017) Choosing the choice: Reflections on modelling decisions and behaviour in demographic agent-based models. *Population Studies* 71(1), 85-97

Gray, J., Bijak, J., & Bullock, S. (2016). Deciding to Disclose: A Decision Theoretic Agent Model of Pregnancy and Alcohol Misuse. In A. Grow & J. Van Bavel (Eds.), *Agent-Based Modelling in Population Studies* (pp. 301–340). Dordrecht: Springer.

Mondragón, E., Gray, J., Alonso, E., Bonardi, C., Jennings, D. SSCC TD: A Serial and Simultaneous Configural-Cue Compound Stimuli Representation for Temporal Difference Learning. *PLoS ONE* 9 (7), e102469

Interests

Interests include juggling, origami, cycling, volunteering, baking, and occasional extreme sports (performed a 13,000' solo skydive; raising £750 for Marie Curie Cancer Care).

References

Available on request.