

Thomas Wood

Professional profile

- Data scientist available for contracts and consulting work.
- Experience in running machine learning projects with complex requirements and international teams of developers, from data gathering to deployment.
- Specialising in two major areas of AI: Computer Vision and Natural Language Processing.
- NLP: spoken and written dialogue systems, information retrieval, document classification.
- Deep learning, image processing, convolutional neural networks for both images and text.
- International experience: several years in Spain and Germany and fluent command of several European languages.
- Certified by Microsoft as Azure Data Scientist Associate.

Technologies

- Python, R, Java, C++, Flask
- Machine learning: TensorFlow, Scikit-Learn, Weka, Spark MLlib, Docker, Scipy, Numpy, Azure ML, AWS, Google Cloud Platform, GPUs and GPU clusters.
- Experience developing for: Windows, Mac, Linux, Unix, Android.
- NLP: OpenNLP, NLTK, Stanford NLP, BERT/ELMO, LSTM, Convolutional Neural Networks, Spacy.

Career summary

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|---|-------------------|
| Data Scientist (consultant) - various including NHS England, Crown Prosecution Service | Feb 2020-present |
| <ul style="list-style-type: none">• Predictive models for staff attrition and staff training outcomes for NHS employees and for criminal cases.• NLP model for survey responses: https://whatwomenwant.whiteribbonalliance.org | |
| Data Scientist (contractor) - Boehringer Ingelheim, Ingelheim am Rhein, Germany/London | Apr 2019-Feb 2020 |
| <ul style="list-style-type: none">• Major European pharmaceutical company.• Developed predictive model in TensorFlow using GPU for clinical trial protocols.• Processing of highly domain specific texts. | |
| Data Scientist (contractor) - Tesco plc, London, UK | Apr 2018-Mar 2019 |
| <ul style="list-style-type: none">• Designed, developed, trained and deployed two large scale machine learning solutions.• Vehicle route planning for 4000 stores around the UK.• Order prediction for 15 million home shopping customers based on purchase history. | |
| Data Scientist – CV Library, London, UK | Apr 2017-Mar 2018 |
| <ul style="list-style-type: none">• Principal data scientist at job board with 12 million jobseekers.• Developed recommender system for sending job alerts to candidates, with 9% conversion rate. | |

- Trained deep learning models (CNN, RNN, LSTM, word2vec, seq2seq) to analyse candidates' CVs and job descriptions, using Google GPU instances.
- Deployed model to analyse candidates' CVs in real time when they register, giving better candidate experience and a lower bounce rate on the registration form.

Computer Vision Scientist – Veridium, Oxford, UK

Oct 2015-Mar 17

- Managed a project to develop neural network face recogniser.
- Trained convolutional neural networks with TensorFlow, able to classify images such as fingerprints or pharmaceutical pill bottles.
- Designed and patented cryptographic measures to protect biometric data.

Knowledge Engineer / Pre-sales consultant – Artificial Solutions UK, Barcelona, Spain

May 2011-Oct 2015

Solution architect – Pattern Science AG, near Frankfurt am Main, Germany

Aug 2009-Mar 2011

- Machine learning for monitoring market sentiment

Research assistant / Teaching assistant – Psychology Dept., Birkbeck College, London

Sep 2008-Jul 2009

- Analysed and processed MRI data sets using Matlab and Perl.

Research assistant – European Synchrotron Radiation Facility, Grenoble, France

Jul-Aug 2006

- Simulated X-ray scattering on atoms using Mathematica.

Research assistant – Center for Applied Mathematics and Theoretical Physics, Maribor, Slovenia

Jul-Aug 2005

- Publication: *Testing adiabatic invariance in separatrix crossing* (Robnik & Wood, 2006).

Education and qualifications

MPhil Computer speech, text and internet technology – University of Cambridge

Sep 2007-Jul 08

- Research project: pronoun resolution with semi-supervised machine learning.
- Speech recognition/synthesis, linguistics, language modelling.
- Machine learning.
- Information retrieval and relationship extraction from unstructured text.

MSc Physics, 1st class Hons. – University of Durham, UK

Sep 2003-Jul 07

- Research project: simulations of Raman scattering.

4 A Levels, 2 AS Levels – all at grade A (highest possible grade)

Jul 2003

- A Levels: Mathematics, Further Mathematics, Physics, Latin.

Other skills

Languages: Spanish (fluent), German (fluent), French (fluent). Mandarin (certified level HSK 2). Russian (conversational).