

DANIEL HOMOLA

www.danielhomola.com | [GitHub](#) | [Google Scholar](#) | [Twitter](#) | [LinkedIn](#)

EXPERIENCE

Data Scientist

Nov 2016 -

QuintilesIMS

London, UK

- As a data scientist in the Predictive Analytics team, I use machine learning (Python, R, Spark) to help our clients from the pharmaceutical sector with their challenging projects. These include (rare) disease detection, patient ranking, population clustering, feature selection and prioritisation.
- Designed and implemented (R, Python) our team's ETL and modelling pipeline.
- Carried out numerous research projects, which expanded and refined our data science capabilities.

Science to Data Science

Aug 2016 - Sep 2016

Marks and Spencer

London, UK

- Using advanced NLP and ML techniques, our team of four built a prototype of a chatbot which could interact with customers and hence automate a portion of the customer service of M&S.

Computational and Systems Medicine

Oct 2013 - Sep 2016

Imperial College London

London, UK

- Created www.corrmapper.com: an online research tool for the integration, exploration and interactive visualisation of complex biomedical datasets. CorrMapper uses advanced feature selection and covariance estimation algorithms with state of the art visualisation modules to reveal the relevant correlation networks of biomedical datasets. The paper of this project is in preparation.
- Other notable projects from my PhD: [Science Flask](#), [BorutaPy](#), [MIFS](#).

EDUCATION

Imperial College London

Oct 2013 - Sep 2016

PhD in Bioinformatics

London, UK

- *Modules studied:* machine learning, multivariate statistics, advanced visualisation, data integration.
- *Thesis:* Integration and visualization of clinical-metabolic datasets for medical-decision making.

Imperial College London

Oct 2011 - Sep 2012

MSc in Bioinformatics and Theoretical System Biology – Distinction

London, UK

- *Modules studied:* bioinformatics, statistics, programming (Python, R, MySQL), data analysis.
- *Thesis:* Tool development for 16S rRNA gene copy number normalisation and visualisation.

Eötvös Loránd University

Sep 2006 - Jun 2010

BSc in Biology – First Class Honours

Budapest, Hungary

- *Modules studied:* biochemistry, cell biology, genetics, evolutionary biology, immunology.
- *Thesis:* Universal laws in the construction of protein and gene networks.

TECHNICAL STRENGTHS

Coding	Python (advanced), R (advanced), TensorFlow (basic), PySpark (basic)
ML	linear and logistic regression (lasso, ridge, elasticnet), random forest, gradient boosting (XGBoost), neural networks (RNNs), SVM, PCA, t-SNE, graphical lasso, feature selection: L1, ensemble, mutual information based
Database	MySQL, SQLite
Web	AWS, HTML5, Flask, CSS, JavaScript, D3.js, DC.js
Tools, OS	Certified Scrum Master, Git, Bash, L ^A T _E X, Linux, Windows

AWARDS

Jun 2015	Imperial-MIT Global Fellows Programme, Boston
Oct 2013	STRATiGRAD PhD Training Award, sponsored by the Wellcome Trust
Oct 2011	BBSRC Masters Training Award for MSc in Bioinformatics

EXTRACURRICULAR

2013	Rowed in the novice eight squad of Imperial College London
2005 - 2011	Award winning, freelance web-designer with dozens of delivered projects
2000 - present	Playing the guitar, writing, recording music
1990 - present	Skiing, snowboarding