

# Theo PAVLAKOU

## PERSONAL DATA

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## EDUCATION

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| SEP 2015<br>- Present  | PhD in Machine Learning<br><b>The University of Edinburgh</b><br>Topic: <i>"Developing Tractable Density Estimator Models"</i><br>  Supervisor: Dr. IAIN MURRAY   |
| SEP 2014<br>- AUG 2015 | MSc by Research in Data Science<br><b>The University of Edinburgh</b><br>Distinction - <b>88.61%</b><br>Thesis: <i>"Large Scale Optimisation Algorithms for Machine Learning"</i><br>  Supervisor: Dr. PETER RICHTÁRIK<br>Subjects include: Machine Learning & Pattern Recognition, Text Technologies, Probabilistic Modelling & Reasoning, Information Theory, Advanced Databases.   |
| OCT 2010<br>- JUL 2014 | MEng Electrical & Electronic Engineering<br><b>Imperial College London</b><br>First Class Honours - <b>81.47%</b> (Top 5% of Year)<br>Thesis: <i>"Finding Events in Twitter Data using Sparse PCA"</i><br>  Supervisor: Dr. MOEZ DRAIEF<br>Subjects include: Digital Signal Processing, Machine Learning for Computer Vision, Probability & Stochastic Processes, Optimisation, AI, Intelligent Data & Probabilistic Inference, Wavelets & Applications, Computational Finance, Advanced Signal Processing, Algorithms & Data Structures. |

## ACHIEVEMENTS

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| SEP 2015 | MSc by Research in Data Science Dissertation Prize Award, The University of Edinburgh           |
| JUL 2014 | Henry Ford II Scholar Award for best examination results in final year, Imperial College London |
| -        | Dean's List for Academic Achievement, 3 years, Imperial College London                          |
| JUL 2012 | CGCA Student Activity Award, Imperial College London Student Union                              |
| JUL 2009 | Top student of the year for Maths, Physics & Drama, American Academy Larnaca                    |

## WORK EXPERIENCE

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REFERENCES AVAILABLE ON REQUEST

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| JUL 2013<br>- SEP 2013 | Software Development Engineer Intern<br><b>Amazon, Seattle, WA, USA</b><br>On Amazon Instant Video team for device playback. Wrote client-side features to make video streaming more robust to errors. Also enhanced visual tools to analyse performance of CDNs that devices streamed from.   |
| JUL 2012<br>- SEP 2012 | Digital/Software Engineer Intern<br><b>Dialog Semiconductor, Graz, Austria</b><br>Set up a verification environment for a timer module and a RAM-to-Core module in UVM System Verilog for the main project of the office. Wrote scripts in Perl and Template Toolkit to enable the automation of writing C code structs and definitions. Also wrote scripts that enabled the automation of checking out of files for the version control being used. |

## PUBLICATIONS

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- 2014 Theo Pavlakou, Arta Babaei, and Moez Draief. "Improving Event Recognition Using Sparse PCA in the Context of London Twitter Data." *Information Sciences and Systems 2014*. Springer International Publishing, 2014. 357-365.

## TECHNICAL SKILLS

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Programming: JAVA, Python, C++, Matlab, SQL, HTML, CSS  
Programming Tools: Terminal, Git, Perforce, Eclipse, Sublime, Vim, XCode  
Methodologies: Design Patterns, Agile, TDD, Code Reviewing, Version Control  
Office Tools: Latex, Gimp, Excel, Word, PowerPoint  
Operating Systems: Mac OSX, LINUX (Ubuntu), Microsoft Windows

## MAJOR PROJECTS

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- 2015 (Thesis for MSc by Research, Edinburgh) Implemented many modern optimisation algorithms in Python (SAGA, SVRG, SDCA) and tested them on convex problems (logistic regression) and also on non-convex problems (neural networks). This required skills in Machine Learning, Convex Optimisation, Probability and Design Patterns.
- 2014 (Final year project, Imperial) Built an application in Python to detect events using only Twitter data in a streaming fashion using Sparse PCA. This involved Machine Learning, Data Preprocessing, Linear Algebra, etc.
- 2013 (Third year group project, Imperial) Built an application in C++ using various open source libraries to detect differences between the movement in two people using the Kinect as the input data. Combined skills in Software Engineering Design, Machine Learning, Signal Processing and more.

## INTERESTS AND ACTIVITIES

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| OCT 2012<br>-JUL 2013 | <b>Imperial Entrepreneurs Vice President of Events</b><br>Helped to organise some of the most popular events known to Imperial and even inter-university events with other entrepreneur clubs. The Imperial Entrepreneurs Society is very active on campus and puts on many competitions to provide a platform to young business-minded individuals to materialise their ideas.  |
| DEC 2011<br>-APR 2012 | <b>TEDxImperialCollege</b><br>Was part of a team to organise one of the most successful TEDx event at Imperial College London, which had sold out the largest lecture theatre in the university of 800 people and had videos on the front page of the TED website. This included finding and securing sponsorship, budgeting and managing how the finances were spent. It also included meeting up weekly to address any concerns that may have been raised. |
| 2007<br>-2010         | <b>Band</b><br>Played in a band that became very successful in Cyprus and also got invited to play in Austria and Greece. Made two albums and had lots of merchandise.   |

## LANGUAGES

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ENGLISH: Mothertongue  
GREEK: Advanced  
BRAZILIAN PORTUGUESE: Advanced  
SPANISH: Lower Intermediate (Level 2 Qualification)