Sebastian Grubb

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Nationality: British and French

GitHub
github.com/sg3510
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Education

2010-2014 — London, UK

Imperial College London - *M.Eng in Electrical & Electronic Engineering* — First Class Honours

• Masters Project: *Active Sample Selection for Matrix Completion* | Supervisor: Moez Draief
PDF and MATLAB source: github.com/sg3510/al_proj
Proposed a new algorithm (Clustered Knowledge Search) to reduce number of times new samples must be requested to improve the performance of a recommender system. Resulting algorithm had similar performance (in terms of advantage to random sampling) but better runtime than other proposed methods (e.g. MCMC search by DJ Sutherland et al). Work featured in best final year projects.
• Modules included: Mathematics, Advanced Signal Processing, Probability and Stochastic Processes, Optimisation, Machine Learning for Computer Vision, Intelligent Data & Probablistic Inference, Spectral Estimation & Adaptive Signal Processing and Real-Time Signal Processing
• Third Year Project: Led a group of 8 people in planning and assembling a home energy optimisation system. Researched and developed algorithms for presence detection (using a HMM) as well as temperature prediction (using Gaussian Process Regression).

2008-2010 — Paris, France

International School of Paris – *International Baccalaureate* — 742 UCAS points

• Obtained 42 out of 45 points with 4 higher level subjects (Top 1% out of 50,000 international candidates)

Experience

Oct 16 - Now — Mountain View, US

Google (Android) – *Product Manager (Associate Product Manager II till Oct 17)*

• Led an engineering team to increase instrumentation on Android to better understand users and system performance in the wild. From this, used insights to change behaviour of the settings app, notifications and the quick settings shade in Android O.
• Responsible for emojis on Android P. Fixed multiple emojis and added support for Unicode 11 emojis.
• Responsible for crash behaviour and analytics on Android P. Changed the app crash behaviour and helped create a new pipeline for crash data collection.

Mai 15 - Oct 16 — Zürich, CH

Google (YouTube) – *Associate Product Manager I*

• Led an engineering team in launching new features in YouTube Analytics including: new demographics report, new ad rates reporting and introduced watch time as the main reporting metric (replacing views). Tested new features with A/B tests to understand impact.
• Responsible for the product's key metrics and used insights to guide decisions of product planning

Jul 14 - Mar 15 — London, UK

Eddy Labs (Founder.org Class of 2015) now Ally Smart Care – *Machine Learning Engineer*

• Eddy was a home automation startup that, by the use of sound, made a product which detects a wide range of home events. Fully designed software roadmap for product as first technical member.
• Wrote initial prototype in Python on a Raspberry Pi. Built the sound recognition feature extraction stages from scratch (including: MFCC, roll-off and zero-crossing) to optimise code for slow hardware.
• Main challenges were to use audio features that worked well for environmental/ambient sounds thus it was not possible to simply reuse music or speech recognition algorithms but instead we had to extract features that would generalise well for sounds such as windows breaking, running water or footsteps. The main classifier used was a feed-forward neural network after comparing performance to an SVM w/kernels. A simple Bayes net was constructed to infer events from multiple recognised sounds to infer events (e.g. has the house been robbed?) though this was more theoretical due to lack of data.
• Built first iterations of technology stack: website, back-end, signal processing and activity detection

July - Sept 13 — Cambridge, UK

ARM Holdings plc – *Product Management Intern*

• Did competitive analysis on products and companies to help with the launch of a microprocessor across automotive, consumer electronics and industrial markets
• Proposed features to be implemented in future microprocessors based on market needs
• Wrote low-level Fast-Fourier Transform implementation for benchmarking purposes with results being published on the official ARM blog.

July-Sept 12 — Cambridge, UK

ARM Holdings plc – *Summer Engineer Intern*

• Created a new software tagging language in Perl for use in a processor security module by analysing the strengths and weaknesses of a previously used language (XSLT)
• Designed a text pattern detection program to efficiently tag data in very large text/Verilog HDL files

April 2012 — London, UK

J.P.Morgan – *Technical Spring Week Intern*

• 3rd best team in a programming and presentation challenge organized over a period of 2 days

Skills

Technical Skills (ranked by experience)

• Programming Languages: Python, MATLAB, C, C++, SQL, Javascript, Assembly, HTML,Ruby, R, Perl and Java
• Technologies: Linux, Flask, MongoDB, RabbitMQ, Twitter Bootstrap, jQuery, Nginx, Adobe Creative Suite, AWS, embedded development (Keil, Xilinx ISE), Google Analytics, Facebook Ads

Languages

• French (native) • English (native) • German (conversational)

Responsibilities

2012-2014 — **Imperial Entrepreneurs** – *Technical Director (2012-13 and 2013-14 academic year)*
London, UK
- Worked the committee to help run the society's daily operations and organise events such as Silicon Valley Comes to Imperial or Ideas Empowered (a seed funding competition)
- Designed and implemented the society's new wesbite for the "Silicon Valley comes to Imperial" iniative

2011-2012 — **Imperial College LGBT** (Welfare Society) – *Media Officer*
London, UK
- Fully rebranded society, analysed website analytics to implement new site and decreased bounce rate by 35%

Awards and Achievements

2011-2014 — **UKESF Scholarship** *(Worth £1,500/year for 3 years)*
Cambridge, UK
- The UKESF (UK Electronic Skills Foundation) scholarship is awarded the best students in Electronic Engineering and Computer Science at any of the 8 UK partner universities

2010 — **Maurice Hancock Award for outstanding results** *(Worth £1,000)*
London, UK
- Presented to top 10 incoming students (out of 200) of Electronic & Electrical Engineering

Interests

Travel
- Organized and budgeted trips to the Shanghai World Expo as well as a Romanian Orphanage to volunteer

Technology
- Started programming at the age of 13 by making games in Ruby and other small programs
- Designed websites for multiple Imperial student societies as well as group projects

Sports
- Compete in 5 to 10km races for Imperial Athletics in BUCS (British inter-university sport competition)
- Regularly cycled London to Cambridge (90km) during summer 2013

Reading
- Enjoy books on behavioural economics such as 'Thinking, Fast and Slow' and 'Predictably Irrational'