

# Alex Tsaptsinos

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Menlo Park, CA

  /alexTsaptsinos

## COURSEWORK

### GRADUATE

Advanced Machine Learning  
NLP with Deep Learning  
Statistical Modeling & Theory  
Artificial Intelligence  
Advanced Software Development  
(*Teaching Asst x2*)  
Parallel Computing (CUDA)  
Stochastic Methods in Engineering  
Optimization  
Numerical Linear Algebra

### UNDERGRADUATE

Stochastic Analysis  
Data Mining & Machine Learning  
Probability & Statistical Theory  
Communication Theory  
Logic & Set Theory  
Combinatorics  
Core Algebra & Analysis

## AWARDS

2017  
ISMIR Student Grant  
2016  
Cleobury Prize, Pembroke (& '15)  
Pembroke Sportsperson of the Year  
Academic Scholarship (& '14, '15)  
2014  
Sir Roger Bannister Scholarship  
2013  
Domus Scholarship, Pembroke

## SKILLS

### PROGRAMMING

Advanced:

Python • R • TensorFlow • C++ •  
Matlab •  $\text{\LaTeX}$

Familiar:

Julia • Objective-C • C • CUDA

### LANGUAGES

Native English  
Intermediate Greek & Spanish  
Basic French

## INTERESTS

Football (soccer) • Music  
production • Travel • Music  
appreciation • DJing • Literature

## EDUCATION

### STANFORD UNIVERSITY | MS ICME - Data Science (4.03 GPA)

June 2018 | Stanford, CA

- ISMIR published paper on applying state-of-the-art deep learning NLP models to music genre classification [1].
- Active part of research group in computer-music interaction, music information retrieval, and deep learning techniques applied to music.
- Highly interested in the opportunities presented by machine learning in personalized education, and its uses in the music industry.

### UNIVERSITY OF OXFORD | MMath Mathematics (1st Class)

June 2016 | Oxford, UK

- Developed a strong interest in stochastic modeling and their computational methods.
- Final year dissertation on the use of duality-based Monte Carlo methods in modeling American and other path-dependent options.
- Achieved a First in all Final Examination papers with marks of 94%, 94% and 91%, ranking 4/87.
- Captain of 'Blues' 1st XI Oxford Football team (OUAFC) for '15-16 season.

## EXPERIENCE

### SHAZAM | R&D Intern

June 2017 – September 2017 | Redwood City, CA

- Project lead for optimization of the Shazam backend structure for the core recognition algorithm process, utilizing Genetic Algorithms.
- Results produced via optimization algorithm A/B tested, before implementation worldwide.
- Input on active research within the R&D team; looking to improve Shazam functionality through signal processing techniques and data analysis.
- Provided advice on testing of RNNs in various problems.

### MIME CONSULTING | Data Analyst Intern

June 2016 – August 2016 | London, UK

- Maintained several of their data-based education services using Access & Excel; provided data insights and visualizations using Tableau.
- Constructed backend data through screen-scraping for flagship platform, *Skills Route*, a 16+ learners platform to help students choose courses.

### UNI GUIDE | Independent iOS Developer

July 2014 – June 2016 | Bristol, UK

- Mastered smartphone application creation and development using Objective-C; designed, built, and launched my own app, *Uni Guide*, a course finder for prospective UK university students.
- Several months after launch undertook major update, redesigning and monetizing app whilst creating a free counterpart, *Uni Guide Free*.
- Combined the apps received over 4000 global downloads.
- Built and managed supporting website, [www.uniguideapp.co.uk](http://www.uniguideapp.co.uk).

## PUBLICATIONS

[1] A. Tsaptsinos. Lyrics-based music genre classification using a hierarchical attention network. *arXiv preprint arXiv:1707.04678*, 2017.