Alex Tsaptsinos

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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
Cleoburey 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 • 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 global implementation. See `https://alextsaptsinos.github.io/` for more.
- 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*.

PUBLICATIONS

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