



# Alexander Lattas

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# **Education**

Imperial College London | PhD in Computer Science | 2019 - Present

Subject 1 | 3D Computer Vision for photo-realistic human avatar generation from unconstrained images

Subject 2 | Human face geometry and BRDF acquisition with a Light Stage capturing machine

Imperial College London | MSc in Advanced Computing | 2017-2018

Thesis | High Resolution 3D Face Generation with Generative Adversarial Networks (Python, Tensorflow, Graphics)

Modules | Statistical Machine Learning, Graphics, Reinforcement Learning, Computer Vision, Deep Learning, Finance

Athens University of Economics and Business | BSc Management Science and Technology | 2013-2017

Thesis | Improving control on Tensorflow Queues API (Technologies: Python, C++, Tensorflow) (Merged #10175)

Modules | Software Engineering, Algorithms, Statistics, Databases, Business Analytics, Website Architecture, IT Systems

University College London | School of Management (Affiliate Student) | 2015 - 2016

Modules | Innovation Management, Project Management, Corporate Financial Strategy, Digital Marketing, Psychology

# **Publications**

Lattas, A., Wang, M., Ghosh, A. and Zafeiriou S. Multi-view Facial Capture using Binary Spherical Gradient Illumination. ACM SIGGRAPH. (2019).

Novel diffuse-specular separation and reconstruction for pore-level details multi-view facial captures with a Light Stage.

Lattas, A. and Spinellis, D. Echoes from Space: Grouping Commands with Large-Scale Telemetry Data. International Conference on Software Engineering, (40th). (2018).

Evaluation of ML, heuristic, and naive optimization GUI command grouping methods using telemetry data.

# Research Experience

Research Assistant | Imperial College London | October 2018 - March 2019

Created the largest (known) dataset of photorealistic high-resolution 3D human faces and researched ways which Artificial Intelligence can generate photorealistic humans for AR and VR. (facesoft.io)

Technologies: Python, Tensorflow, Menpo, 3D Graphics, Stereo Reconstruction, Photogrammetry

Software Engineering Research Associate | Business Analytics Lab | July 2016 - June 2018

Undertaken three projects, under the guidance of Prof. D. Spinellis. Subjects: memory forensics, data-driven history of UNIX security and data-driven software engineering (paper accepted, ICSE 2018). (balab.aueb.gr)

Technologies: Python, scikit-learn, custom UNIX Kernels, C, memory maps, git

Econometrics Research Assistant | Centre of Planning and Economic Research (KEPE) | August 2014 - February 2015

Performed a linear analysis of the oil market in Greece and indicated anomalies to the Greek Competition Commission. Technologies: Statistics, Stata, SPSS

# **Work Experience**

#### 3D Computer Vision Scientist | Facesoft | October 2018 - Present

Generating photorealistic human avatars and working on facial recognition and behavioural analysis. (facesoft.io) Technologies: Python, Tensorflow, Pytorch, 3D Graphics, Stereo Reconstruction, Photogrammetry

#### Innovation Intern (Computer Vision) | Facesoft | July 2018 - September 2018

Optimized a pore-level detail 3D face reconstruction pipeline using a Light Stage and reduced execution time by 75%. Technologies: Python, Photogrammetry, 3D models, 3D Reconstruction, LUA, Bash

#### Technical Consultant Intern | Oracle | March 2017 - May 2017

Customised Oracle Access Manager for three customers by creating Java plug-ins, Servlets and branded pages. Presented practical tutorials and for Oracle's Machine Learning powered cloud security platform to high officers. Technologies: Java, JSP, UNIX, AWS, Cloud Security, PaaS / IaaS / SaaS services

#### Co-founder, International Coordinator | Junior Achievement Alumni Greece | June 2013 - February 2017

Entrepreneurship network with more than 200 members and now golden member among numerous European entrepreneurship networks. Co-founded it and started as Project Manager, organising more than 10 seminars, networking events and contests. Since 2015, responsible for our brand image and international events. (ja-alumni.eu/network)

# **Technical Competencies**

**Programming Skills** | Python, SQL, UNIX, Tensorflow, Pytorch, Menpo, git, PHP **Other Skills** | Machine Learning, Computer Vision, 3D Models, Photogrammetry, Data Visualization

# **Achievements**

#### Postgraduate Scholarship 2017-2018 | Hellenic Petroleum

Postgraduate scholarship of £24.000, for studies in Advanced Computing at Imperial College London (1 out of 7 total).

### Social Impact Award 2014 | Impact Hub Athens

With Blood-e, a novel platform facilitating blood donation by linking donors to those in need (1 out of 3 total). (bloode.org)

#### **5 Honorary Distinctions** | Athens University of Economics and business

Awarded by AUEB during my Bachelor's for academic performance, entrepreneurship endeavours and exceptional projects.

#### **Courses and Certifications**

Summer School in Machine Learning for Digital English Language Teaching	University of Cambridge	2017
Quality Software Developer Foundation Certificate in Maintainability	Software Improvement Group	2016
Software Developer: Foundation	Software Improvement Group	2016