

Work Experience

Software Development Engineer	Amazon Development Centre, London, UK	Sep 2015 — Present
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- **Amazon Profiler team (Jun 2017 - present)**
 - Provide internal tooling for performance optimisation and monitoring across Amazon backend services.
- **LOVEFiLM By Post — DVD and Blu-ray rental service team (Sep 2015 - May 2017)**
 - Lead engineer for the *LOVEFiLM By Post* mobile application (Cordova, Ionic, AngularJS).
- **Amazon Web Services Certifications**
 - AWS Certified Solutions Architect Associate (AWS-ASA-17150)
 - AWS Certified SysOps Administrator Associate (AWS-ASOA-4686)
 - AWS Certified Developer Associate (AWS-ADEV-3263)

Software Engineer	Funifi Ltd, Cyprus	Sep 2014 — Sep 2014
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- Refactored server-side code (NodeJS), extended the existing REST API with new functionality for the upcoming Funifi store, and started the implementation of an administration web dashboard using AngularJS.

Software Development Engineer	Amazon Development Centre, London, UK	Jun 2014 — Aug 2014
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- Member of the LOVEFiLM By Post rental service team as summer intern.
- Designed and implemented an internal service that automates the printing process for the labels of envelopes sent to customers containing their rented DVD or Blu-ray titles.

Software Engineer	Data Management Systems Laboratory, UCY	Jun 2013 — Jun 2014
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AnyPlace: Indoor Positioning and Navigation System for Big Data

- Developed a complete architecture for an Indoor Positioning and Navigation system that provides a Web2.0 API for 3rd-party clients backed by a NoSQL datastore (<http://anyplace.cs.ucy.ac.cy>).
- Implemented an Android app that offers real-time positioning and navigation indoors, and a web-based application developed using Google Dart that provides similar services through any HTML-5 compliant browser.
- Designed & Implemented a Wi-Fi RSS-based radio map construction algorithm that can filter out useless Access Points and erroneous or unnecessary Wi-Fi fingerprints using the Hadoop – Map Reduce framework.

Special Scientist, Intern	Data-Driven Multithread Research Laboratory, UCY	May 2012 — Aug 2012
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- Developed a plugin for Eclipse IDE to provide content assistance and custom pre-processing for an in-house language.

Software Developer, Intern	Computer Graphics Laboratory, UCY	Dec 2011 — Jan 2012
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- Imported crowd movement simulation data and presented them in a realistic 3D stage using 3D figures - *Unity3D*
- Represented the lab in CS Open Day 2012, with two games developed using Unity3D and Microsoft KINECT sensor.

Education

Oxford, UK	University of Oxford	Sep 2014 — Sep 2015
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- Master of Science in Computer Science, *Grade: Distinction*
- Thesis: *Single-round vs Multi-round Distributed Query Processing in Factorised Databases*
 - Designed and implemented in C++ a *distributed query engine*, coined D-FDB, that evaluates join queries in a distributed setting. In contrary to traditional systems that use flat relational tables, D-FDB uses data factorizations (f-representations) end-to-end exploiting their theoretical size-bounds against flat data to minimize the total query execution time.
 - Additionally, I developed several serialization and bit-compression techniques to efficiently transmit data factorizations over the network whilst retaining the factorization compression levels.
- Coursework: Concurrent Algorithms & Data Structures (Scala), Computer Security, Functional Programming (Haskell), Concurrent Programming (Scala), Database Systems Implementation, Theory of Data and Knowledge Bases

Nicosia, Cyprus	University of Cyprus, UCY	Sep 2010 — Jun 2014
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- Bachelor of Science in Computer Science, *GPA: 9.41 /10 (Ranked 1st of class)*
- Thesis: *AnyPlace: Indoor Positioning and Navigation System for Big Data* as described in *Work Experience*
- Coursework (*only selected courses*): Algorithms and Complexity, Distributed Algorithms, Parallel Algorithms, Computer Architecture, Systems Programming, Parallel Processing

Lausanne, Switzerland	Ecole Polytechnique Federale de Lausanne, EPFL	Sep 2013 — Jan 2014
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- Erasmus Student for one semester, Department of Computer Science
- Coursework: Software Engineering, Concurrent Algorithms, TCP/IP Networking, Program parallelization on PC clusters

Languages & Technologies

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- *Programming / SDKs*: C, C++, Java, Go, Elixir, Android, Ionic & Cordova
 - *Web*: Google Dart, HTML5, CSS & SASS, Javascript (ES5, ES6, Typescript), AngularJS + AngularDart, ReactJS

Other Technical Experience

Projects

- **Personal Website (2008 – Present):** Personal website and blog (<https://lambrospetrou.com>)
- **ACM SIGMOD 2015 Programming Contest:** Implemented a database management system that evaluated thousands of validation requests each with a set of Boolean Conjunctive Queries (extended with mathematical and logical operators) against a constantly modified database (<http://db.in.tum.de/sigmod15contest/leaders.html>)
- **ACM SIGMOD 2014 Programming Contest:** Implemented a social network analysis system that responded to numerous Top-K queries (<http://www.cs.albany.edu/~sigmod14contest/leaders.html>)
- **ACM SIGMOD 2013 Programming Contest:** Implemented a high-throughput streaming document filtering system using a dynamic set of exact and approximate continuous keyword match (<http://sigmod.kaust.edu.sa/leaderboard.html>)

Awards & Achievements

- Nominated for one of the few HEFCE scholarships for graduate studies at University of Oxford, UK (Fall 2014)
- Nominated for a Fulbright Student Scholarship for graduate studies in USA (Fall 2014)
- ACM SIGMOD 2015 Programming Contest, ranked *1st nationwide (Cyprus & UK)* and *5th worldwide* among 38 teams. Selected as one of the finalists to present our solution in ACM SIGMOD conference in Melbourne, Australia
- ACM SIGMOD 2014 Programming Contest, ranked *1st nationwide* and *9th worldwide* among 33 teams
- ACM SIGMOD 2013 Programming Contest, ranked *1st nationwide* and *10th worldwide* among 55 teams
- Graduated Saint George Lyceum - Lakatameia, Nicosia, Cyprus, with excellence award (2005-2008) – GPA: 19.67 /20
- Promoted to Second Lieutenant of Infantry during my two years of obligatory army service (2008-2010)

Publications

- **Demo paper:** "*Anyplace: A Crowdsourced Indoor Information Service*", K.Georgiou, T.Constambeys, C.Laoudias, **L.Petrou**, G.Chatzimilioudis and D.Zeinalipour-Yazti "Proceedings of the 16th IEEE International Conference on Mobile Data Management" (MDM '15), Pittsburgh, Pennsylvania, USA, June 15-18, 2015
- **Demo paper:** "*Crowdsourced Indoor Localization and Navigation with Anyplace*", **L.Petrou**, G.Larkou, C.Laoudias, D.Zeinalipour-Yazti and C.G.Panayiotou "Proceedings of the 13th International Conference on Information Processing in Sensor Networks" (IPSN '14), Berlin, Germany, April 15-17, 2014
- **Demo paper:** "*Anyplace: Indoor Positioning and Navigation in the Big-Data Era*", **L.Petrou**, G.Larkou, C.Laoudias, D.Zeinalipour-Yazti and C.G.Panayiotou "Proceedings of the 4th International Conference on Indoor Positioning and Indoor Navigation" (IPIN '13), Montbeliard-Belfort, France, October 28-31, 2013

Interests

- Love playing volleyball, indoor (setter) and on the beach.
- Fan of martial arts — Practised Karate Shotokan for 8 years.