

## Work Experience

**Software Development Engineer** **Amazon Development Centre, London, UK** **Sep 2015 — Present**

- **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**

- 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**

- 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**

### 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**

- 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**

- 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**

- 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**

- 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**

- Erasmus Student for one semester, Department of Computer Science
- Coursework: Software Engineering, Concurrent Algorithms, TCP/IP Networking, Program parallelization on PC clusters

## Languages & Technologies

- *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

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### 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

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- 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

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- **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

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