## **Lambros Petrou**

<u>lambrospetrou.com</u> github.com/lambrospetrou

#### **Work Experience**

## Software Development Engineer

#### Amazon Development Centre, London, UK

Sep 2015 — Present

- Member of the LOVEFiLM By Post rental service team. LOVEFiLM allows customers to rent Movies and TV seasons on DVD and Blu-ray by post (<a href="https://www.amazon.co.uk/lovefilm">https://www.amazon.co.uk/lovefilm</a>).
- Amazon Web Services Certifications
  - o 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

## Amazon Development Centre, London, UK

Jun 2014 — Aug 2014

- Engineer
- 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 (<a href="http://anyplace.cs.ucy.ac.cy">http://anyplace.cs.ucy.ac.cy</a>).
- 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 theoritical 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): Databases, Data Structures and Algorithms, Algorithms and Complexity, Distributed Algorithms,
  Parallel Algorithms, Computer Architecture, Systems Programming, Parallel Processing, Internet Technologies, Computer Networks,
  Data mining in the Web

#### Lausanne, Switzerland

## Ecole Polytechnique Federale de Lausanne, EPFL

Sep 2013 — Jan 2014

- Erasmus Student for ONE (1) semester, Department of Computer Science
- Coursework: Software Engineering, Concurrent Algorithms, TCP/IP Networking, Program parallelization on PC clusters (MPI, OpenMP, DPS)

## **Languages & Technologies**

- Programming / SDKs: C, C++, Java, Google Go, Elixir (learning), 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 (<a href="http://www.cs.albany.edu/~sigmod14contest/leaders.html">http://www.cs.albany.edu/~sigmod14contest/leaders.html</a>)
- ACM SIGMOD 2013 Programming Contest: Implemented a high-throughput streaming document filtering system using a dynamic set of exact and approximate continuous keyword match (<a href="http://sigmod.kaust.edu.sa/leaderboard.html">http://sigmod.kaust.edu.sa/leaderboard.html</a>)

#### **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

- Have played volleyball for 10 years in Cyprus.
- Practised Karate for 8 years, where I developed self-control and the ability to remain calm in obnoxious situations.