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Lambros Petrou

lambrospetrou.com
github.com/lambrospetrou

Work Experience

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

- Member of the team responsible for the LOVEFiLM By Post rental service. Through this service customers can rent DVDs and Blu-Rays for movies and TV shows (https://www.amazon.co.uk/gp/bypost/storefront).

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 team responsible for the LOVEFiLM By Post rental service (DVD, Blu-ray) 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.
- **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

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
- 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

- 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)

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)

Languages & Technologies

- *Programming / Web / SDKs*: C, C++, Java, Scala, Google Go, Google Dart, HTML5, CSS, Javascript (jQuery, jQueryUI, jQuery Mobile), Google AngularJS + AngularDart, Android SDK, Hadoop framework
- *Databases*: Microsoft SQL Server, NoSQL Couchbase Server, MongoDB, MySQL
- *Tools/ IDEs*: VIM, Visual Studio, Eclipse, Intellij IDEA, PHP Storm, WebStorm, Unity3D

Interests

- Have been playing 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.