

## Work Experience

### Software Development Engineer

Amazon Web Services (AWS), London, UK

May 2019 — Present

- **Amazon CodeGuru Profiler (public Amazon Profiler product)**
  - [https://aws.amazon.com/codeguru/features#Amazon\\_CodeGuru\\_Profiler](https://aws.amazon.com/codeguru/features#Amazon_CodeGuru_Profiler)
  - Lead engineer of the infrastructure platform for the CodeGuru Console used by teams across US and UK.
  - Architected and developed the CodeGuru Profiler API multi-region infrastructure applying best-practices for *Infrastructure as Code* using CloudFormation, AWS CDK (Kotlin), and integrating with our internal CI/CD tools.
  - Contributed to the user experience of the Console using React, Redux, Cypress.

### Software Development Engineer

Amazon Development Centre, London, UK

Sep 2015 — May 2019

- **Amazon Profiler team (Jun 2017 - May 2019)**
  - Provide internal tooling for performance optimisation and monitoring across Amazon backend services.
  - Worked on our backend services and APIs written in Java and Kotlin.
  - Researched, and worked on the implementation of the Profiler Efficiency Recommendations feature which codifies efficiency issues and provides recommendations to the users.
  - Maintained an AWS Lambda@Edge interceptor in order to simplify the deployment of Amazon-authenticated websites using serverless technologies. Used by many teams across Amazon (e.g. AWS, Alexa, Consumer).
  - Deployed static websites and several supporting APIs (Node.js) following a serverless architecture in AWS (API Gateway, AWS Lambda & Lambda@Edge, CloudFront, DynamoDB, S3, and more).
  - Re-designed and implemented the Profiler website using React, Redux, Cypress.
- **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, SASS).
  - Worked on backend services and parts of the LOVEFiLM website (Java, Spring MVC).
- **Amazon Web Services Certifications**
  - AWS Certified DevOps Engineer - Professional
  - AWS Certified Solutions Architect - Associate
  - AWS Certified SysOps Administrator - Associate
  - AWS Certified Developer - Associate

### Software Development Engineer - Intern

Amazon Development Centre, London, UK

Jun 2014 — Aug 2014

- Member of the LOVEFiLM By Post rental service team where I implemented a service that automates the printing process for the dispatched disks' envelope labels (FlexMail, .NET, Java, Swing).

### 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 Couchbase, 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 Hadoop (Map-Reduce framework).

## 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 a *distributed join query evaluation engine* (C++), coined D-FDB. In contrary to traditional systems, D-FDB uses data factorizations (f-representations) end-to-end exploiting their theoretical size-bounds against flat relational tables minimizing the total query execution time.

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*

Lausanne, Switzerland

Ecole Polytechnique Federale de Lausanne, EPFL

Sep 2013 — Jan 2014

- Erasmus student for one semester, Department of Computer Science

## Languages & Technologies

- *Languages*: Kotlin, Java, Go, JavaScript/TypeScript, Clojure/ClojureScript (hobby), Elixir (hobby), Ruby (scripting)
- *Favourite stack* :) Serverless (AWS Lambda, AWS Fargate), ReactJS, Go or Node (JavaScript or ClojureScript)

## Other Technical Experience

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### Projects

- **Personal Website (2008 – Present):** Personal website and blog (<https://www.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
- 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

### Other interests

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- Volleyball addict (setter) and fan of martial arts