Sakis Kasampalis

CONTACT
INFORMATION

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STUDY
INTERESTS

functional programming, hardware prototyping

PORFTOLIO &
REFERENCES

I am the author of the book Mastering Python Design Patterns and I was a technical reviewer of the books Mastering Object-Oriented Python and Learning Python Design Patterns. My personal projects are listed on my homepage. If you like hardware prototyping check my videos on vimeo. A more technical-oriented CV is available on Stack Overflow. You can also check my Stack Exchange activity. My public recommendations are on LinkedIn.

PROFESSIONAL
EXPERIENCE

Pycom, Eindhoven, The Netherlands

Full-Stack Developer   **September 2016 – Present**

Pycom is a startup that provides low-cost, low-power, Python programmable devices that enable companies to build IoT-ready products that can connect to the most popular LPWANs available.

- Member of the Pybytes development team. Pybytes is a middleware Web platform for IoT device management and data visualization.
- Developed a platform that integrates with Ingram Micro for completely automating the product, order, and stock management of pycom.io. The Ingram Micro integration saved Pycom thousands of euros of costs and hundreds of man-hours.
- Automated Pycom's Kickstarter's invoice generation using Xero's Python API. The Xero Integration saved the company at least three weeks of manual work.

Keywords: *NodeJs (beginner), Express (beginner), LoopBack (beginner), Python (proficient)*

Mapscape **BV** (via TMC), Eindhoven, The Netherlands

Software Engineer   **November 2015 – July 2016**

Worked in the NDS compiler refactoring team. Our main goal was to create an API for constructing NDS compilers dynamically. To do that we created a modular NDS compiler, in contrast to the monolithic legacy interface it used to have. To make sure that our refactoring did not cause any regression, we have developed specialised regression testing tools and our code was backed by unit tests/mocks. Other goals of the team include automatic building block dependency and sqlpp11 adoption.

- Created an NDS regression testing tool which increases our confidence that our changes are regression-free.
- Created an API for using cached prepared statements with Mapscape's proprietary DBs. That increases the performance and the security of our queries.
- Released the first version of the modular compiler. During that process we cleaned up and added reusable components to a large amount code (dropped from a scale of thousands of lines to a scale of hundreds).

Keywords: *C++11 (proficient), SQLite (proficient), Python (proficient), Google Test/Mock (beginner)*

ASML **BV** (via Sioux), Veldhoven, The Netherlands

Back-end Software Engineer   **October 2014 - October 2015**

My focus was on the back-end parts of Cerberus, but I was also involved in front-end development. My first large Cerberus back-end task was to migrate the legacy monolithic Java importers to a staging approach. The staging importers use HANA as the main source of information, and MySQL + Scala for the ETL (Extract, Transform, and Load) parts. For the front-end I developed two Scala Play applications for listing the users of a CUG (Closed User Group) and for viewing extended LDAP user information.

- Migrating the Java importers to staging increased their performance significantly ($> 50\%$ increase).
- The Scala Play applications helped my team to quickly identify problems with users that can't access Cerberus due to different issues (e.g. out-of-sync passwords, password expired, missing

privileges).

Keywords: *MySQL (proficient), Scala (beginner), Play (beginner), ETL (proficient), Java (proficient), PHP (proficient)*

Mapscape BV, Eindhoven, The Netherlands

Software Engineer   **November 2011 – September 2014**

During this project at Mapscape I worked as a member of the Test Tools team. This team focuses on creating software that validates, tests, and improves digital map data. One of my main tasks was to implement from scratch a functional test (C++ program) called Navigability, which is used to detect road network errors. Another important activity was contributing in creating a regression test suite for the Test Tools team. My rest activities included fixing bugs and adding new features to existing products.

- Due to its well design and careful implementation Navigability turned out to be one of the fastest (about 3 times faster than the other tests) and most scalable (for example no problem to run it for the whole Europe) tests.
- The regression test suite increased test coverage from 0% to about 80%.
- The number of bugs decreased by 5% within 1.5 year.

Keywords: *C++ (proficient), Ruby (proficient), SQLite (proficient), Bazaar (proficient), Rails (beginner), Scrum (proficient), KanBan (beginner)*

AND Automotive Navigation Data, Rotterdam, The Netherlands

R&D Software Engineer   **June 2011 – October 2011**

During my time at AND I worked as a Software Engineer on big (geospatial) data and the map creation pipeline. My main task of was to develop a Python tool that aggregates GPS information gathered from several providers and can be used for calculating important road network statistics. I also improved the map creation pipeline of AND by fixing bugs and implementing new features.

- The Python tool ended up being very fast and scalable (able to extract the contents of thousands of files within a few minutes).
- The number of pipeline bugs decreased by 3% within 5 months.

Keywords: *Python (proficient), PostgreSQL (proficient), CMake (beginner)*

Risø National Laboratory for Sustainable Energy, Roskilde, Denmark

Software Engineer (Research Assistant, short-term contract)   **January 2011 – March 2011**

During my 2011 project at Risø I worked as a Software Engineer on a software prototype related to the 3D reconstruction of a fuel cell. My main task was to create a QT OpenGL application that supports importing and visualizing a 3D model of a fuel cell, changing the parameters of the visualization, and exporting statistics about the model in PDF form.

- Through the proper use of Design Patterns, the created tool was bridged nicely with the existing code written by the researchers during their PhD.
- The prototype achieved its goal, which was to find potential customers for selling the results of the research.

Keywords: *QT (beginner), OpenGL (beginner), C++ (proficient), XML (proficient), Git (proficient)*

Risø National Laboratory for Sustainable Energy, Roskilde, Denmark

Software Engineer (Summer Job)   **June 2010 – August 2010**

My main task for this Risø project was to create an application that fully-automated the error-prone and slow process of manual data treatment. Manual data treatment was required because: (1) the embedded system that was used by the Department of Energy Conversion and Storage was generating results in an inconvenient way: many result files that needed to be merged manually were generated by default, (2) the generated data had precision and math errors, and they could not be used before fixing those errors manually.

- The created application fully automated the improvement process of merging the files and fixing the data errors. The scientists saved a lot of time (and money) that were wasting by applying the improvement process manually.
- The code was written and documented in such a clean way that gave the chance to the scientists to extend the tool even further after my departure.

Keywords: *VBScript (beginner), Subversion (proficient)*

dTek Net.working, Thessaloniki, Greece

Web Developer   **September 2007 - August 2008**

My main assignment at dTek was to extend the functionality of scorespro.com, one of the best Internet live score portals. Among the many websites that I developed/extended are also the e-shop propagandask8.com and the model agency performances.gr).
- scorespro.com belongs to the top 50 sports sites worldwide.
- The features that I developed during my time at dTek are still used.

Keywords: *PHP (proficient), MySQL (proficient), Drupal (beginner), OsCommerce (beginner)*

Alexander Technological Educational Institute, Thessaloniki, Greece

Software Engineer (Industrial Placement)   **October 2006 - March 2007**

My main assignment during my industrial placement was to develop the GraphNetwork Java applet, which is used in a research project related with facility location algorithms. Among other activities I configured and installed shell scripts and cron jobs in favor of the "Electronic submission of courses" application. Finally, I also co-organized a seminar with the topic "Free Software Systems", with presentations from important contributors such as Sun Microsystems and FreeBSD.
- With the proper use of Object-Oriented Programming practices the applet ended-up being easy to extend with new algorithms and having good performance.
- The seminar had great success. Our guests included a FreeBSD kernel developer talking about how FreeBSD development works and how we can contribute, and a Sun (now Oracle) representative talking about Java, OpenJDK, Eclipse, and more.
- Due to my contributions the Electronic Submission of courses was used successfully on time.

Keywords: *Java (proficient), Swing (proficient), UNIX utilities (proficient)*

EDUCATION   **Technical University Of Denmark**, Kongens Lyngby, Denmark

Master of Science in ICT Engineering   **August 2008 - October 2010**
- Thesis: Copy On Write Based Filesystems - Performance Analysis and Implementation

Keywords: *programming, software engineering, agile development, game development, embedded systems, operating systems, artificial intelligence, security*

DADIU, Copenhagen, Denmark

Programmer at the computer game specialization   **2009 - 2010**
Keywords: *C#, Unity, game development*

Alexander Technological Educational Institute, Thessaloniki, Greece

Cisco Networking Academy Program (CCNA)   **2006 - 2007**
Keywords: *cisco, tcpip, ethernet, routing, switching, vlan, subnetting, ios, wan*

Alexander Technological Educational Institute, Thessaloniki, Greece

Bachelor of Science in Computer Engineering   **September 2003 - August 2007**
- Thesis: Overview of the Semantic Web and Design of a Web Ontology for European citizens

Keywords: *programming, data structures, software engineering, artificial intelligence, computer architecture, operating systems, networking, databases, security*

LANGUAGE   English (very good), Dutch (reasonable), Greek (native)
SKILLS