Vaios Papaspyros -- Curriculum Vitae

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Date of Birth	28^{th} April 1994	**Github**	https://github.com/bpapaspyros
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Experience

May 2016 - Oct 2016 **Research intern at Inria Nancy Grand-Est, LARSEN/Resibots Team, Nancy, France**
Intelligent Trial & Error with the iCub humanoid robot

Supervisor: Jean-Baptiste Mouret
Related Publications: "Safety-Aware Robot Damage Recovery Using Constrained Bayesian Optimization and Simulated Priors". Neural Information Processing Systems (NIPS) 2016, Barcelona, Spain

The project (Funding: ERC "ResiBots" Project) researches how robots can recover from unforeseen damages through fast and data-efficient trial-and-error algorithms. The internship focused on introducing safety aspects to the intelligent trial-and-error damage recovery techniques, to achieve similar results with fragile and/or expensive robots such as the iCub without causing additional damages during the trials.

Education

Sep 2012 - Present **Computer Engineering & Informatics Department, University of Patras Greece**
(Under)graduate Student

CEID offers a 5 year undergraduate program which is a master equivalent (300 ECTS). During these five years is offered a wide variety of computer engineering and science courses, including lab hours and course projects concerning main problems of the computer science field. Main interests in the area of programming, AI & machine learning, computer architecture and algorithms.

Costeas-Gitonas School, Athens, Greece
July 2012 **High School | Final Grade: 19.2/20**

Became acquainted with the field of computer science, earning the International Certificate in IT skills (Cambridge) and ECDL core diplomas. Furthermore, I studied basic HTML and C programming as a part of the computer science course as well as independently from the school's program.

2013 - Present **Online Courses**
Coursera, MIT Open Courseware, Stanford Center for Professional Development

I have attended over 10 courses covering a wide range of topics such as Machine Learning, Software Engineering, Android Development, Parallel Programming, Linear Algebra, Computer Architectures, Data Structures, Digital Signals, etc.

Some of them are:

- Machine Learning by Stanford (Coursera)
- Programming Cloud Services for Android Handheld Systems by Vanderbilt University (Coursera)
- Linear Algebra (MIT Open Courseware)
- Programming Methodology (CS106A) (Stanford Center for Professional Development)

Activities

Oct 2012 - Feb 2014 **Robotics Club (Polymechanon Team), University of Patras, Greece**
Member

Mainly worked on developing a graphical user interface using ROS for the project "Polymechanon". Developed more programming skills in accordance with guidelines followed by the community. Gained a lot of useful knowledge about version control systems and code documentation. Furthermore, I studied the basics in the theory of robotics, including basic forward and inverse kinematics.

Publications

Workshops

Papaspyros, V., Chatzilygeroudis, K., Vassiliades, V., & Mouret, J. B. (2016). **Safety-Aware Robot Damage Recovery Using Constrained Bayesian Optimization and Simulated Priors**. arXiv preprint arXiv:1611.09419 | Link

Projects

Programming

- **C/C++** - Contributor to limbo, a highly templated C++11 Bayesian optimization framework. University assignments including parallel programming such as the Boost, OpenMP, CUDA and OpenCL APIs, algorithm engineering courses with LEDA, C++ object oriented design & programming, OpenGL graphics, data structures, sorting algorithms, HTTP request parser, posix threads, TCP/IP server-client implementation.

- **Python** - Implementations including the Aho-Corasick algorithm and genetic programming problems. Plenty of experience with matplotlib, numpy and the waf build system.

- **Java/Android** - University assignments including swing and JavaFX development. Android applications including micro controller communication.

- **SQL & JDBC** - University assignments combining SQL database design & implementation as well as GUI support through JavaFX and JDBC (for SQL database handling).

- **Matlab/Octave** - University assignments for the Scientific Computation and Digital Telecomunications (quantizer, huffman code, PCM, FSK, PSK implementations) courses. Furthermore, assignments for the online course Machine Learning (Coursera).

- **HTML/CSS/PHP/Javascript** - Simple mailing list manager (with a simple interface) using the campaign monitor php API.

AI
MACHINE LEARNING AND ROBOTICS

- Interested in advancing in this field.
- Research intern at Inria - Intelligent Trial & Error with the iCub humanoid robot.
- Worked on developing a GUI for the "Polymechanon" project.

Competitions

- **IEEExtreme9.0** (Oct 2015) competitor with the team *"Tokyooo"*

World Rank 555/1923 Country Rank 16/67 University Rank 3/8

Skills

ADVANCED: C/C++(11), Python, Java, Matlab/Octave, LaTeX, Object Oriented Design & Programming, Policy-based design

INTERMEDIATE: OpenMP, CUDA, OpenGL, Robot Operating System (ROS), bash scripting, MySQL & Sqlite, HTML 5, CSS, PHP, Javascript

Certificates

- English - Proficiency Level (C2), Cambridge Certificate
- French - DELF (B2), International Centre for French Studies

- European Computer Driving Licence (ECDL)
- International Certificate in IT Skills

Languages

GREEK: Native
ENGLISH: Fluent - Professional working proficiency
FRENCH: Limited working proficiency

Interests

- Machine Learning
- Programming
- Basketball
- Artificial Intelligence
- Robotics
- Music/Guitar