

# Alexandros Solanos

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## Experience

Sep 2016 – **Software and Devops Engineer**, *TourPanda*, Patras, Greece.

- Present
- I worked as Lead of the developer team, managing people and developing software using test-driven development (TDD).
  - I designed and built a complex, horizontally scalable RESTful API using Node.js.
  - I created the main custom application-level algorithms for the resource availability, agnostic of resource type and resource characteristics.
  - I built a RESTful API using Nest.js for analytics purposes.
  - I developed the booking assistant, the application which end-users book from, and a large part of the dashboard, using React.js.
  - I transitioned the deployment to Kubernetes, with a staging and a production environment, IaC in GCP and a complex CI/CD pipeline within 2 months, cutting operational costs by over 40 percent and facilitating a faster, fully-automatic and less error prone release cycle, freeing valuable developer time.
  - I implemented the frontend and the backend of multiple live-update systems based on WebSockets.
  - I was the Scrum Master in our Agile process, obtaining a deep understanding on the Agile culture and why there are certain practices around it.
  - I wrote unit, integration and e2e tests (using cypress).
  - I worked with Node.js, Redis, MongoDB and PostgreSQL in the backend.
  - I worked with React.js, Next.js and jQuery in the frontend.

Sep 2014 – **Process streamlining / IT support**, *Blue Star Ferries Agency*, Patras, Greece.

- Sep 2016
- I modernized the processes of the company: from doing data entry and manual comparison using different and inconsistent excel files, the users could now do data entry in a friendly and dynamic web interface which I built. The app was fed all the excel files and could do powerful comparisons of the aggregations of the data between different years, and of course allowed entry of new data. The application freed several man-hours per day and ended up being used years after my departure (and may still be used). The frontend was built in jQuery and the backend used CakePHP and MySQL.
  - I did generic IT support on Windows-based users.

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## Education

Sep 2012 | **Master's in Electrical and Computer Engineering**, *University of Patras*,  
present GPA: 7 (pending), Thesis: Design and implementation of a prototype IoT system based on containers and the Lightweight M2M protocol, *Patras, Greece*.

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## Skills

Programming Languages	Typescript, Python 2/3, Bash, PHP, C / C++, Java
Libs / Frameworks	Express.js, Next.js, React.js, Nest.js, CakePHP, Qt (C++ and Python), Gtk 2.0, Various ORMs
Devops tools	Kubernetes, Helm, Helmfile, Ansible, Terraform
People	Lead of developer team, Scrum Master, Interviewing for technical positions, Public speaking
Languages	Greek (native), English (C2)
Editors	VSCode, Vim, QtCreator, Eclipse, Sublime Text

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## Projects

### **Wallch**, *C++ / Qt*.

A first C++ GUI experiment that made its way into the official Ubuntu repositories (2010); a wallpaper changer. A big learning project for a lot of things around building software. Built along with a classmate.

<https://launchpad.net/wallpaper-changer>

### **MalvaGallery**, *PHP / CakePHP, MySQL*.

A simple website built with CakePHP for my artist uncle. A learning project for web development which also features users and paintings management.

<https://malvagallery.com/>

### **University Department E-class**, *PHP / CakePHP, MySQL*.

An open e-class clone (<https://www.openeclass.org/en/>); a university project. Co-created along with another university student.

<https://github.com/themetalfleece/university-department-eclass-project>

### **NotiSIM**, *Java, Android*.

NotiSIM will send an SMS message to a number of your preference when it detects that your SIM card has changed. That way you can easily get the phone number of the newly inserted SIM card, in case your phone is stolen. The application supports white-listing any number of SIM cards, so 2 or more people can use the same phone with different SIM cards. Note that the application runs only on boot for detecting SIM changes and thus it does not run constantly, draining your battery.

### **MacroPolo**, *Python 2 / Qt*.

A python module that can be used in order to automate high-level processes (macros)

<https://github.com/hytromo/MacroPolo>

### **Anem**, *C++ / Qt*.

A graph generator that combined the powers of C++, ImageMagick and rrdtool to generate graphs regarding the power output, wind direction and wind speed of wind turbines. This side-project is dating back to 2013 and it wasn't intended for production use but it ended up being used for years by Petrogaz (<https://www.petrogaz.gr/en/>). Sadly the project got discontinued.

<https://github.com/hytromo/anem>

### **python-digitalocean-ssh**, *Python 3*.

A CLI-only python project aimed to make DO VMs easily accessible via ssh at any time.  
<https://github.com/hytromo/python-digitalocean-ssh>

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## Awards

### **Bosch XDK Ideation Jam Winner**, *Aug 2016*.

Our team's project was deemed to be the best on using Bosch's XDK in an internet of things application: <https://bit.ly/2YZZ3xr>  
Bosch

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## Volunteering

May 2012 – **Official Ubuntu Member**, *Ubuntu*, Online.

- Present
- Helping users at the Ubuntu Forums
  - Helping users at Ask Ubuntu
  - Reporting posts at the Ubuntu Forums for their better functionality
  - Bug Reporting at Launchpad and Gnome Bugzilla - testing beta applications
  - Providing Assistance on IRC Chatrooms
  - Proposing Ideas at Ubuntu Brainstorm
  - Developing scripts and helpful programs for the Ubuntu Community
  - Contributing at community wiki (<https://bit.ly/3f0zGRI>)
  - Various open source contributions, like in terser (official webpack minifier) and CakePHP

Jun 2010 – **Assistant to the team leader**, *TsikiBoom Camping*, Chania, Greece.

- Jul 2010
- Team activities
  - Creative learning

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## Papers

### **Cyber-Physical Microservices: An IoT-based Framework for Manufacturing Systems.**

Conference: 1st IEEE International Conference on Industrial Cyber-Physical Systems (ICPS 2018), Saint Petersburg, Russia, May 15-18, 2018.  
<https://bit.ly/2BXPLsz>