

# Martynas Pumputis

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## CONTACT INFORMATION

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## INTERESTS

Distributed Systems, Networking, Operating Systems, Low-level Debugging, Computer Security

## EXPERIENCE

**Weaveworks Ltd**, London, UK  
*Software Engineer*

**February, 2016 - Current**

- Maintained [Weave Net](#) – open-source container networking solution.
- Implemented features such as overlay network encryption, container firewall, new overlay type.
- Fixed bugs in Linux kernel and debugged Go runtime issues affecting many container users.
- Diagnosed and resolved customer networking issues.
- Technologies used: Go, C, Linux kernel, Open vSwitch, eBPF, iptables, Docker, Kubernetes, AWS, GCP.

**SumUp Payments Ltd**, Berlin, Germany  
*Software Developer*

**November, 2012 - September, 2015**

- Designed and developed a distributed system for handling payment transactions.
- Implemented EMV transactions handling stack.
- Integrated PIN pad and Chip And Signature card readers.
- Integrated HSM interface and crypto protocols.
- Technologies used: Erlang, C, Riak, PostgreSQL, Jenkins, EMV, HSM, GICC.

**ErlState Software**, Vilnius, Lithuania  
*Software Engineer*

**September, 2010 - October, 2012**

- Designed and developed backend and frontend of a distributed highly-available framework running general business processes for telco resource management.
- Taught Erlang to newcomers.
- Technologies used: Erlang, Python, Javascript, CouchDB, RabbitMQ, SNMP, Jenkins.

**CERN**, Geneva, Switzerland  
*Software Development Internship*

**February, 2010 - May, 2010**

- Built tools for analysis and representation of large data sets from Large Hadron Collider within CMS Offline Database Group.
- Technologies used: Python, Javascript, Oracle.

**Self-employed**  
*Freelance Software Developer*

**2004 - 2010**

- Worked on various projects with PHP, Python, C, Javascript, HTML/CSS, MySQL, PostgreSQL.
- Administrated Linux systems.

## EDUCATION

**ETH Zürich**, Switzerland

*MSc in Computer Science, Distributed Systems Track*

**September, 2013 - November, 2015**

- Built a [hardware-aware run-time system with a built-in message passing for scheduling C tasks in parallel](#) for the multikernel operating system Barrelfish.
- Implemented and analysed [the optimized version of Viterbi algorithm](#).
- Ported the Go programming language to the Barrelfish operating system.
- Master Thesis: *“Message Passing for Operating Systems and Programming Languages”*, supervised by Prof. Dr. Timothy Roscoe, Dr. Antonios Kornilios Kourtis, Dr. David Cock.

**Vilnius University**, Lithuania

*BSc in Software Engineering*

**September, 2006 - July, 2010**

- Thesis: *“Cloud Computing Storage Solutions”*, supervised by Adomas Svirskas.
- Scholarship for excellent academic records (2006 - 2010).

**Uppsala University**, Sweden

*Exchange Student in Computer Science*

**September, 2008 - July, 2009**

## SKILLS

*Programming languages*

- Fluent: Go, Python, Erlang.
- Have used: Bash, C, Rust, C++, Java, Ruby, Javascript, Assembly (x86\_64), PHP, Perl, Prolog, Ada.

*Daily development tools*

- Tmux, Zsh, Vim, Git.

*Operating systems*

- Linux, familiar with BSD family, Barrelfish, exploring Unikernels.

*Misc*

- Concurrent and parallel programming.
- TDD, property-based testing, fuzzing.
- CI/CD, code reviews, automating everything.
- Debugging operating system kernels, TCP/IP stacks, distributed systems.
- Design of custom network protocols.
- Reverse engineering.
- Relational and non-relational databases.
- Development of web applications.

*Natural languages*

- Lithuanian (native), English (fluent), German (good), Polish (good), Russian (basic).

## HONORS AND AWARDS

- Winner of the Area41 2014 security conference challenge organized by [Facebook](#).
- *“Speed Ticket Prize”* at [Spawnfest 2012](#).
- National Olympiads in Physics at High School (2002 - 2006).
- Winner of Lithuanian Webpages Championship in Education Category in 2004.

## TALKS

- *“Go and Linux Namespaces: Better Don’t Mix”*, Golang Meetup, Vilnius, May 2017.
- *“OVS for Containers with Weave Net”*, Open vSwitch Conference, San Jose, November 2016.
- *“Is your container’s IP real?”*, ContainerSched, London, June 2016.
- *“Go on the Multikernel OS”*, Golang Zürich Usergroup, Zürich, October 2015.

## HOBBIES

- Rock and alpine climbing.
- Experimental music.