

# DAMIANO DONATI

SOFTWARE ENGINEER

## CONTACTS

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## SKILLS

**GOLANG** (PROFICIENT)  
**PYTHON** (FLUENT)  
**JAVASCRIPT** (SOME EXPERIENCE)  
  
**C / C++** (SOME EXPERIENCE)  
**BASH/SH** (SOME EXPERIENCE)  
  
**SQL** (FLUENT)  
**HTML/CSS** (FLUENT)

### TOOLS and SYSTEMS

**GIT / GITHUB**  
**INFRASTRUCTURE:**  
TERRAFORM, KUBERNETES, AWS  
**CONTAINERIZATION:**  
DOCKER, DOCKER COMPOSE  
**DATABASES:**  
MYSQL, REDIS, RETHINK DB  
**MACHINE LEARNING:**  
TENSORFLOW, SCIKIT LEARN  
**INTERNET of THINGS (IoT):**  
ARDUINO, RASPBERRY PI

## LANGUAGES

**ITALIAN** (MOTHER TONGUE)  
**ENGLISH** (PROFESSIONAL LEVEL)

## HOBBIES

**IOT, DYI ELECTRONICS**  
**COOKING, CHESS, BOARD GAMES**

## EXPERIENCES

### SOFTWARE ENGINEER @ PUSHER (acq. MESSAGEBIRD) (UK)

November 2018 - Present

- Worked on the **Pusher Channels** team designing and developing a high throughput and low latency **websocket as a service message bus** developing its infrastructure which serves **400K developers** across the world
- Planned and lead the efforts to migrate Pusher Channels from a mutable infrastructure built with VMs/Puppet to a new **immutable infrastructure** built with **Terraform** and **Kubernetes** on **AWS**
- **On-call** for operating the **entire Pusher infrastructure** which serves 800 Billion events per month thorough **40 Kubernetes clusters** across several AWS regions

### SOFTWARE ENGINEER INTERN @ DIGISTYLE.it (IT)

June 2016 - January 2017

- Developed Frontend for various webservices and apps in **HTML5, CSS3, Javascript** (AngularJs)
- Wrote resilient Backends in **Golang** and **NodeJS** with SQL and NOSQL (**MongoDB**) databases
- Designed and deployed cloud Server Infrastruct. w/ **Docker & Kubernetes** which serves **~1M users/year**

### VOLUNTEER FIREFIGHTER @ PROVINCE OF TRENTO (IT)

September 2011 - Present

## EDUCATION

### Master's Degree in

### COMPUTER SCIENCE @ UNIVERSITY of TRENTO (IT)

2016 - 2019

I've done my Master's Degree in Computer Science specializing in **Data Science**.

I've studied classes like: Computability, Computational Complexity, Distributed Algorithms and Systems. And wrote my thesis on: **From Monolithic to Cloud Native Infrastructures: a real'world migration**.

### Bachelor's Degree in

### SOFTWARE ENGINEERING @ UNIVERSITY of TRENTO (IT)

2012 - 2015

I've done my Bachelor's Degree in Software Engineering at the University of Trento following characterizing classes like:

Programming (C), Object-oriented Programming (C++, Java), Optimization Algorithms,

Software Engineering, Software Project Management, Relational Databases, Networks and Network Security

## PROJECTS

### GRONTAB | GOLANG library for parallel & persistent job scheduling and running

- Crontab-like syntax for time-based scheduling of Parallel commands executions
- High Test Coverage and Deployed in Production, Lightweight footprint (statically-linked binary)
- Persistency and Consistency across restarts thanks to a key/value store with ACID transactions
- Open Source code here: <https://github.com/damdo/grontab>

### PROJECT "ESODO" | company infrastructure re-engineerization

- Studied and Developed company infrastructure re-engineerization @ DIGISTYLE.it
- Deployed High Available Infrastructure on **Kubernetes & Docker** behind cloud loadbalancers
- Configured virtual-hosts mechanism in **Nginx** with **HTTP/2** (TLS certs autorenewal)
- Developed for the infra a monitoring & alerting for crashes/exceptions, notifying via tg/slack/email

## AWARDS

### ITALIAN DEVELOPERS HACKATHON 3RD TN @ Italy - 2018

GitHub Issues' Dashboard for the official Italian Organization on GitHub (**Python, GitHub APIs**)

### OPEN DATA HACKABOT WINNER @ Province of Trento - 2018

Chatbot, with Language Understanding capabilities thanks to OPEN DATA (**Python, Telegram APIs**)

### IoT(ogheter) HACKATHON WINNER @ MUSE (Trento) - 2014

Wearable armwrist bluetooth transmitter (**Python, Raspberry Pi**)

### ICT DAYS HACKATHON WINNER @ University of Trento - 2013

ANDROID application for Winter Universiade 2013 (**Java**)

### GOOGLE HASH CODE QUALIFICATIONS - 2017 & 2018

Participation at both editions of the Google Hash Code Qualifications (**Python**)