

# Louis Opter

San Francisco, CA  
✉ [louis@opter.org](mailto:louis@opter.org)  
🐦 [lopter](#)  
🌐 [lopter](#)  
📌 [Louis Opter](#)  
USA Permanent Resident

## Senior Software Engineer

---

### Experience

- August 2013 to May 2018 **Senior Software Engineer**, [Uber](#), San Francisco.  
Python, Schemaless (column oriented database developed at Uber), Golang, PostgreSQL, Redis:
- Scaled the payments collection back-end from 22M trips in three years to 87M trips per week;
  - Enabled payments collection to work worldwide and designed a Python framework to integrate with payments providers;
  - Started fraud fighting by graphing related Uber accounts saving Uber millions in revenues;
  - Solved crippling operational issues in the payments back-office used for customer support;
  - Led a cross-team project to track code ownership and implement access control in a Monorepo.
- October 2009 to July 2013 **Platform Engineer**, [dotCloud](#), San Francisco.  
dotCloud was the Platform as a Service company that incubated [Docker](#). I worked with: Python/gevent (coroutine-based concurrency framework), ZeroRPC, Redis, Riak, MySQL, MongoDB.
- Added UDP network support in Docker;
  - Integrated a third-party service in the platform to offer monitoring and alerting to customers;
  - Implemented call-tracing in ZeroRPC for Python. [ZeroRPC](#) is a Python/NodeJS RPC originally developed at dotCloud using zmq, gevent and messagepack;
  - Automated fail-over support for [MySQL Master/Slave](#);
  - Solved synchronization issues and implemented metrics support for containers.

---

### Port-folio

- 2014–2017 [lightsd](#), [GPLv3](#).  
A daemon with a JSON-RPC API to control LIFX light bulbs over WiFi:
- Written in highly portable C with libevent;
  - User interface for a [Monome grid](#) using async Python and mypy.
- 2012–present **sam**, *sources available on demand*.  
Self-hosting project covering all aspects of running a service-oriented infrastructure from a monorepo: configuration management (Saltstack), secrets (Vault) & PKI management (x509, SSH, GPG), internal L4/L7 routing/firewalling (Nginx, Netfilter, OpenVPN), backups (Python, Rsync, Restic), CI/CD (Buildbot, Bazel), data storage.

---

### Education

- 2007–2012 **M.S. Computer Science**, [Epitech](#), Paris, France.  
In addition to the regular system programming courses:
- Member of the System Laboratory of Epita & Epitech ([LSE](#)): Developer on the Rathaxes open source project: a domain specific programming language to develop device drivers;
  - C & C++ Teacher Assistant: Assist bachelor students in their projects on Unix and Windows.