

# Curriculum Vitae

Name: Mats Cronqvist  
Phone (mobile): +46 72 7285755  
E-mail: mats@cronqvi.st  
URL: <http://massema.net>  
Based in: Stockholm, Sweden (GMT +1)  
Languages: Fluent in Swedish and English, basic German  
Passport: EU (Swedish)  
Education: Ph.D. in Physics  
Professional Programming Experience: 32 years

## Education

**1992: Ph.D. in Nuclear Physics from the University of Goteborg, Sweden**

**1986: B.Sc. in Physics from the University of Goteborg, Sweden**

The subject of my Ph.D. thesis was: "Reaction Mechanisms in Intermediate Energy Heavy-Ion Collisions"

## Skills

### Cloud:

kubernetes, terraform, AWS stuff (primarily SQS, S3, EC2).

### Operating Systems:

Mostly forgotten: VMS, irix, solaris, hp-ux, ultrix.

In daily use: linux (debian, centos), osx.

### Programming languages:

Mostly forgotten: BASIC, FORTRAN, pascal, various CERN languages.

Up to date: C, javascript, Julia.

In daily use: Erlang, bash.

### Version Control Systems:

Mostly forgotten: cvs, clearcase, subversion.

In daily use: git.

### Architectural Belief System:

Decoupling, Distribution, Asynchronous Message Passing.

### Always Installed:

emacs >= 24, docker.

## Experience

### 2017-present:

Technical Director of 247.ai Sweden office. Managed ~15 developers. Architecture, mostly regarding AWS services; S3, SQS, Glue, Presto. Data analysis using Julia.

**2016-2017: Architect at Campanja, Sweden**

Developing and architecting in a Campanja's system, mainly Erlang. Microservices running under kubernetes in AWS.

**2014-2016: Senior Architect, at Klarna, Sweden**

Protected the corporate revenue streams. My team made sure the cash cow system stayed well-a-functioning. We paid off technical debt, mainly through overload testing with intense profiling, judicious refactoring, and introducing sensible deployment and testing pipelines.

**2012-2013: Chief Architect, at Klarna, Sweden**

Responsible for the migration of the Klarna legacy business system from a monolithic Erlang application to system of loosely coupled services. Technically successful, but the company decided to go down the Enterprise Java route.

**2011: Manager, Core Development, at Klarna, Sweden**

Managed a team of ~10 developers (mostly Erlang). Main task was to migrate functionality from the legacy system to isolated services.

**2010: Manager, Live Operations, at Klarna, Sweden**

Managed the team that operated the Klarna business system. The teams tasks included system administration (Debian), application monitoring, upgrades of hardware and software.

**2007-2009: Senior Developer at Klarna (a.k.a. Kreditor), Sweden**

Implemented various parts of the Klarna business system (written in Erlang). Profiling and debugging.

**2003-2007: System Expert at Ericsson Telecom, Hungary**

Implemented a suite of profiling and troubleshooting tools for Erlang applications. Enabled us to identify numerous bottlenecks, significantly improving performance. In order to write the GUI for the profiler I invented and implemented a GTK binding for Erlang. The C-side is a daemon implementing the Erlang distribution protocol. Most of the C code is generated from the GTK header files.

**1997-2003: System expert at Ericsson Telecom, Sweden**

Implemented the first distributed version of our product. Allowed us to scale out the application on multiple CPUs. Invented the first serious Erlang troubleshooting tools. Still in heavy in-house use.

**1993-1997: Post Doctoral Researcher at Lawrence Berkeley Laboratory, CA, USA**

Wrote major pieces of the software for the E896 experiment at Brookhaven National Lab, including the on-line monitoring system, the event visualization, and most of the track reconstruction. Wrote most of the statistical analysis code for the TRANSPORT experiment at Lawrence Berkeley Lab.

**1986-1992: Graduate school at the University of Goteborg, Sweden**

Wrote many pieces of code for several experiments, mostly related to data analysis and visualization. Awarded a grant by the Sweden-America Foundation to spend a year at Michigan State University, MI, USA. Awarded a grant to develop a simple data analysis program for the Mac to be used in undergrad teaching lab. It was still in use when I graduated.

## **1986: Software contractor**

Hired over summer break by the Nuclear Physics group at the University to develop a data visualization program for nuclear physics experiments. Hugely impressed everyone since it used 2-D graphics.

## **Open Source Programs**

**At [github.com/massemanet](https://github.com/massemanet)**

```
gtknode - an Erlang GTK binding
inotify - an Erlang binding to the Linux inotify API
redbug - a tracing debugger for Erlang
```

**At [github.com/marijnh/CodeMirror/tree/master/mode/erlang](https://github.com/marijnh/CodeMirror/tree/master/mode/erlang)**

```
An erlang mode for CodeMirror (a code editor javascript component)
```

**Maintains [distel](#) (Erlang-Emacs interface)**