

# Harald Nordgren | Full-Stack Developer

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## Experience

### Cantemo

Stockholm, Sweden

Software Developer

April 2016 – Present

Website/webserver development for media-asset management. Cantemo Portal is used by HBO, Disney and Apple, to organize video content. I do back-end development in Python (Django/Flask) in a containerized environment using Docker/Kubernetes/Vagrant. Front-end development in JavaScript (React, Backbone). Elasticsearch, PostgreSQL, Cassandra, PyCharm.

## Master thesis

**Title:** *Guided Transcoding for Next-Generation Video Coding (HEVC)*

**Description:** Research at Ericsson in the H.265/HEVC video coding standard. I investigated methods for reducing complexity and storage requirements for adaptive streaming applications by up to 30%. I used Python and Platform LSF to run heavy simulations, C/C++ for improve the encoder and results exportation to Excel.

## Education

### Lund University, Faculty of Engineering (LTH)

Lund, Sweden

Master of Science in Computer Science

2009 – 2016

Specializing in Software development. Java, C/C++, Matlab, Shell, Haskell

### University of Illinois, College of Engineering

Urbana-Champaign, Illinois, USA

Exchange studies

August 2013 – May 2014

Mathematics, Control theory, signal processing, databases

## Languages

**Swedish:** Native

**English:** Fluent

## Technologies and frameworks

### Python

*Django/Flask (API design, HTTP requests, HTML templates, form data), Webscraper for betting arbitrages, migrate music data from Spotify/Bandcamp to Rateyourmusic (Beautiful Soup, Splinter/Selenium), Sonic the Hedgehog clone, machine learning*

### JavaScript

*React, Backbone, CSS, HTML, Chrome extensions (Movie downloader, automating web games, contributed to Web scrobber)*

### C/C++

*Contributed to qBittorrent (Boost, unit tests) and Qt projects, implemented newsgroup/database, wrote malloc/free from scratch*

### Unix

*Shell scripting (curl, ssh, ffmpeg, awk), Clustering/microservices (Docker, Kubernetes, Vagrant, Elasticsearch, Cassandra), virtualization (OS X, Ubuntu, Red Hat, CentOS, CoreOS, Alpine, Windows), package management (npm, pip, brew, apt-get)*

### Miscellaneous

*Building software (Git, Grunt, Makefile, Jenkins), databases (PostgreSQL, MySQL, Cassandra), Cloud (Heroku), Java (Concurrency, Swing), Matlab (statistics, image compression), Haskell, Perl (language processing), Ruby, MIPS Assembly, Batch script, LaTeX, Excel scripting, Maple*