Gustav Grusell

Highly experienced developer with a keen interest
in video encoding and streaming technologies.

Experience

2015 -   **Developer and scrum master, Team Videocore, Sveriges Television AB**

Team videocore at SVT is responsible for the transcoding and publishing of all Video On Demand (VOD) content for SVT's online platforms. As a developer, I take part in development and maintenance of a system of microservices that handles transcoding, packaging and publishing of VOD content.

Starting in 2019, I also have the role of scrum master in team videocore. As a scrum master, I am responsible for helping the team maintain and improve the agile process, and for ensuring the team can perform at its highest level.

During my time at SVT I have acquired both solid knowledge about, as well as a keen interest in, video encoding and streaming technologies. I have worked a lot with java, kotlin and spring boot, and also with js and react. My role as scrum master has given me good understanding of agile processes and team dynamics.

Some of the highlights from my time at SVT:

- Building **Encore**, our own open source transcoding solution based on FFmpeg, and migrating to encore from our previous proprietary solution.
- Migrating the video workflow from a proprietary service for dash/hls-packaging to handling packaging ourselves with shaka packager.
- Implementing hevc-transcoding to increase visual quality and decrease bandwidth
- Development of a machine-learning based tool for end credits detection.

2014 - 2015   **Senior Lead Developer, Bisnode Sverige AB**

Development of a system for distribution of business data. I have taken big responsibility in development of new subsystems. Development was done using Java, Groovy and Spring. I worked as part of a small agile team.

2010 - 2014   **Java developer, Smartstream Technologies GmbH, Austria**

Development of account reconciliations systems for customers in finance. System was first deployed on Gigaspaces but was then migrated to JBoss Fuse. I lead the work in optimizing the software for resource utilization and throughput, and the migration from Gigaspaces XAP to Fuse Fabric. Development was done with Java and Spring.

2006 - 2008   **Software Consultant, Gnistra AB**

Worked with Java development with JSF, hibernate, as well as development of industrial ultrasonic measuring systems with LabView. Independent work in smaller projects in close collaboration with customers.

2004 - 2006   **Research scientist, environmental modeling, ESS GmbH, Austria**

ESS is a software company specialized in systems for environmental data and environmental modeling. The work was mainly development of software processing for simulating environmental processed, and development of web-based user interface for the simulations. The work included numerical modeling in c++, user interface development in PHP and JAVA, and database management with MySQL.

Education

2013 - 2014   **Master's program in Social-Ecological Resilience for Sustainable Development, Stockholm Resilience Center**

2009   **German language, Vienna university**

1996 - 2003   **Master's Program in Environmental and Water Engineering, Uppsala University**

Technical Experience

Programming Languages   Java, Kotlin, JavaScript, c++, Groovy, python, Labview/G, bash, emacs-lisp, clojure, R

Frameworks   Spring-boot, React

Technologies   Docker, Kubernetes, FFmpeg, Apache Kafka, MySql/MariaDB, Redis, Elastic Search, Cassandra, Oracle, MSSQL, Apache cassandra

Open Source Projects

Encore   A scalable video transcoding tool, built around FFmpeg. Built by the videocore team at SVT. `https://github.com/svt/encore`

Vivict   An easy to use in-browser tool for subjective comparison of the visual quality of different encodings of the same video source. Built with react and js. I created this because I saw a need for simple free tool for comparing video quality. `https://github.com/svt/vivict`

Vivict++   An easy to use desktop tool for subjective comparison of the visual quality of different encodings of the same video source. Based on ffmpeg/libav, it supports a much wider range of codecs and formats than vivict. Built in c++. `https://github.com/svt/vivictpp`

Human Languages

- Swedish - native speaker
- English - fluent
- German - fluent

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gustav.grusell@gmail.com • +46 736401141
www.linkedin.com/in/gustavgrusell • https://github.com/grusell/