

Résumé for Søren Løvborg

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Software engineer with a solid knowledge of web applications, network technology and security, Linux server development and operations, and years of experience in developing and operating IT systems for Siemens, Students Business Relations (DSE) and others.

Languages Danish (native)
 English (fluent)
Nationality Danish

Education

Master of Science in Engineering (M.Sc.Eng.) in Computer Science
Technical University of Denmark (DTU)

Master's thesis: *A configuration system for Siemens Airlink*, 2012

Bachelor's thesis: *Declarative programming and natural language*, 2007

Certified ScrumMaster (Scrum Alliance, 2015)

Curriculum vitae

2012 – present Software developer, Siemens Rail Automation Airlink

- Test and tools development lead.
- Initiator of comprehensive test automation project.
- Requirements and feature development and design.
- Tasked with the design and development of new continuous integration process.

2010 – 2012 Software developer, Siemens Mobility Software

- Primarily Java/JSF web application development.
- Project lead, Siemens Turbomachinery Equipment PDS 2.0 project.
- Worked directly with customers to work out requirements and project scope.
- Received a security clearance from the Danish National Police to work on the "Passport 1.1" project introducing biometrics in Danish passports.

2008 – 2015 Volunteer, Students Business Relations (De Studerendes Erhvervskontakt)

- Infrastructure supervisor at DSE Fair Lyngby, the largest job fair in Denmark (2009 – 2013).
- Member of the board of directors (2010 – 2011).
- Developed internal wiki for knowledge sharing, project management and CRM.
- Developed customer-facing sales site.
- Developed numerous tools for internal and external use.

2009 – 2012 Teacher, "Hands-on Microcontroller Programming" course at DTU

- A laboratory course on embedded development, with a focus on "smart grid" applications.
- Full-time teaching position (two months each year).
- Prepared test setups and produced course materials.

2006 – 2010 Volunteer, Software and Mathematics Council at DTU

- Treasurer (2007 – 2010).
- Website development, event coordination.

Selected projects

Automated testing and verification for Siemens Airlink

When 2012 – present
Contribution Spearheaded development of an automated testing solution
Technologies Python, C++, Linux, Paramiko, Click, PXE



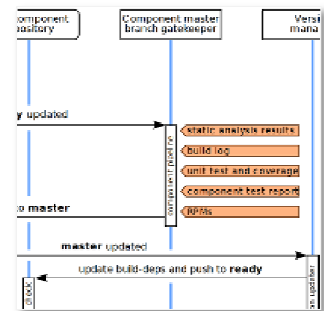
Siemens Airlink provides secure and reliable wireless connectivity between railway rolling stock and wayside equipment. Used worldwide by light rail and metropolitan railways, Airlink carries millions of passengers daily.

When I joined the Airlink software department, the job was characterized by month long test sprints, interrupted only by brief periods of development. In an effort to change this unsustainable test/development balance, I spearheaded the development of a fully automated test solution.

Utilizing a proprietary software-defined networking solution based on Click, the system allows on-the-fly reconfiguration of test setups and dynamic allocation of physical and virtual hardware to a given test run. The Python-based test framework enables automatic test cases to query and manipulate units under test through a compact, high-level notation. Through introspection, program structure and code comments are automatically extracted to create textual descriptions of test cases for review by the product owner.

Continuous integration system for Siemens Airlink

When 2014 – present
Contribution Design and implementation of a continuous integration system
Technologies Git, GitLab, Buildbot, Python, Linux



The Airlink continuous integration project aimed to achieve improved developer output through better tooling and a reduction in build errors and down time.

The project included a much-overdue transition from a legacy nightly build system (based on Subversion plus endless amounts of ad-hoc shell scripts) towards a comprehensive continuous integration system (based on Git, GitLab and Buildbot).

With a coworker, I oversaw the transition to Git including rollout of the new infrastructure, the authoring of team guidelines and documentation, and the design and implementation of the new CI workflow.

Infrastructure supervisor at DSE Fair Lyngby

When 2009 – 2013
Contribution GUI and server development, network and power planning/deployment
Technologies VMware ESXi, Ubuntu Linux, PHP, Python, MySQL, SVG, XSLT, MediaWiki, Mercurial

For five years, I was responsible for all electricity, network and radio infrastructure at DSE Fair Lyngby, the largest job fair in Denmark with more than 150 participating companies and organizations and more than 10.000 visitors.

As supervisor, I worked closely with customers, fellow DSE volunteers and external partners to achieve a smooth experience for both exhibitors and visitors. In addition, I developed everything from custom tools to keep fairground maps and fire safety, network and power plans coherent and up-to-date, to software for self-service kiosks and information displays.

An extended portfolio can be found at <http://www.kwi.dk/about/portfolio/>.