Résumé for Søren Løvborg

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Languages	Danish (native)
	English (fluent)
Nationality	Danish

Software engineer with a solid knowledge of web applications, network technology and security, and years of experience in developing and operating IT systems for Siemens, Students Business Relations (DSE) and others. Development work includes customization of off-the-shelf software, system integration, and application development from scratch.

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

Curriculum vitae

2012 – present   Software developer, Siemens Rail Automation Airlink
- Test and tools development lead.
- Initiator of comprehensive test automation project.
- Feature development.
- Feature design / software requirements development.

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 – present   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 –
Contribution Spearheaded development of an automated testing solution
Technologies Python, C++, Linux, Paramiko, Click, XML, IPsec, PXE, Subversion

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.

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 several 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.

DSE sales site

When   2009 –
Contribution Development, deployment and maintenance (sole developer)
Technologies Python, SQLAlchemy, MySQL, jQuery, SVG, XSLT, Ubuntu Linux

In 2009 I was tasked with completing the customer-facing sales site for DSE, when an external contractor failed to meet a critical deadline. The initial prototype was written (in PHP), tested and deployed over the course of a weekend, just in time for the 2009 opening sale in which 26 companies placed orders amounting to DKK 1,059,500 during the first three hours. It worked flawlessly throughout the financial year.

In 2011 I rebuilt the system from scratch, this time in Python, improving the software design and adding a multitude of features, including CRM functionality and a much requested "cinema seat-selector" style system for booking stands for the DSE Fair.

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