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Luc Engelen

Software developer

Profile

Luc is a software developer that combines a solid theoretical foundation in computer science with practical experience in developing web and mobile applications. After obtaining his PhD at the Eindhoven University of Technology (TU/e), he worked as a Postdoctoral researcher and teacher at the same university before switching to industry. As a software developer, he worked on Java, Rails, and Python back ends for a variety of web applications, including a number of self-service portals for customers of credit card resellers and an enterprise service bus. Additionally, he has worked on an SDK for iOS, native iOS applications, cross-platform mobile applications, and as a full stack developer on a number of Ruby on Rails applications.

Skills

Programming languages

- C
- C++
- Java
- JavaScript (and CoffeeScript)
- Objective-C
- (Object) Pascal
- PHP
- Python
- Ruby
- Swift

Back end

- Java EE (JBoss EAP and WebLogic)
- JUnit
- Mockito
- Ruby on Rails
- Spring Boot

Front end

- Backbone (and Marionette)
- CSS and SCSS
- JavaScript (and CoffeeScript)
- jQuery
- Mocha
- Preact
- Redux
- Webpack

Mobile

- Cocoa Touch
- Cordova
- Maji Mobile
- Objective-C
- Swift

System integration

- Apache Camel

DevOps

- Ansible
- Jenkins
- Microsoft Azure
- Docker
- Terraform

Experience

Kabisa 2016 - Current

Kabisa is specialized in developing elegant software solutions using technologies such as Ruby on Rails, Java, and Python. Luc has worked on the following projects:

Signify - September 2017 - Current

Signify is the new company name of Philips Lighting. Signify is a world leader in connected LED lighting systems, software, and services. Their innovations unlock the extraordinary potential of light to improve the quality of people's lives and to work towards a sustainable future.

Within Signify's indoor navigation department, Luc created a web application for the creation of mapping data. Among other things, this app allows users to define the walkable and non-walkable areas for each floor of a given venue, align technical images and designed maps in the browser, and tiles large images of maps for efficient use on mobile devices. The app produces ready-to-use maps in a proprietary binary format for Signify's indoor navigation SDKs for Android and iOS.

Additionally, Luc and a colleague created a cross-platform mobile application for the Light+Building fair in Frankfurt. This app was used to demonstrate how indoor navigation could assist retail staff during their day-to-day activities.

Technologies used: *Python, Falcon, Pytest, OpenCV, Preact, Redux, Cordova, Webpack, ES6, HTML5 Canvas, Karma, Mocha, Sinon, Chai, Ansible, Terraform, and Microsoft Azure.*

Philips - Januari 2017 - September 2017

Philips is one of the largest electronics companies in the world. Its health watch empowers you to live a healthier life by tracking heart rate and other metrics of your cardio condition, as well as activity, sleep and more.

As a Java developer at Philips, Luc worked on a few of the most mission-critical micro services that power the mobile apps for the Philips health watch. Each micro service is a Spring Boot application, connected to its own PostgreSQL database. The micro services communicate with each other and the outside world via REST APIs and RabbitMQ.

Technologies used: *Java, Spring Boot, RabbitMQ, PostgreSQL, JUnit, Maven, and Mockito*

Euramax - May 2016 - December 2016

Euramax coated products is a world-wide supplier of premium coil coated aluminium. Their products are applied in many industries, ranging from buildings and interiors to transportation- and recreational vehicles.

Euramax uses a number of IT systems in their day-to-day operations. To simplify connecting these systems with each other and with external systems of, for example, their suppliers, they were looking for an enterprise service bus. Luc extended Flux, an existing Kabisa product, to suit the needs of Euramax and developed a number of flows that solved an immediate problem that Euramax was facing.

Technologies used: *Ruby on Rails, CoffeeScript, RSpec, Java, Junit, Maven, MongoDB, Elasticsearch, Docker, Linode, Amazon AWS, and Ansible*

Conta-Clip - October 2016 - March 2016

Conta-Clip is an international producer of electrical and electronic connection technology. Besides being a manufacturer, Conta-Clip services this technology and sells it online.

In a small team of three developers, Luc worked on a hybrid mobile application for Conta-Clip. The mobile application is used to control remote equipment and obtain feedback about the functioning of this equipment. The distinguishing features of this app are communication via both an SMS-based

API and a web-based API, and the possibility to update parts of the app on the fly.

Technologies used: *Maji Mobile (which includes Apache Cordova, Jasmine, Chai and CoffeeScript), Python, and Flask*

Twin Archer Trading - May 2016 - August 2016

Twin Archer Trading is a recent start-up that imports a variety of products from China.

In a small team of three developers, Luc built a business-to-business webshop connected to the product information management system Beeyond. The customer uses Beeyond to manage the products that are offered for sale in the shop. A custom Java application built with Apache Camel is used to synchronize the shop with Beeyond. The shop itself is a Ruby on Rails application.

Technologies used: *Ruby on Rails, CoffeeScript, RSpec, Java, JUnit, Maven, Postgres, Beeyond, Linode, Ansible, and Apache Camel*

Abacus - May 2016

Abacus is a supplier of hardware and software for (online) retailers. They specialize in omnichannel retailing, business intelligence, and product information management.

For one of their customers, Abacus was looking for an FTP server that was simple to use. Together with a colleague of Kabisa's managed services department, Luc set up such a server and automated the provisioning.

Technologies used: *Ansible, Webmin, Amazon AWS, Linode, and ProFTPD*

Euramax - March 2016 - May 2016

Euramax coated products is a world-wide supplier of premium coil coated aluminium. Their products are applied in many industries, ranging from buildings and interiors to transportation- and recreational vehicles.

Luc built a proof-of-concept application that enables Euramax to import the certificates produced by their suppliers into their ERP system straightforwardly. Each coil of aluminium supplied to Euramax comes with a certificate in the form of a XML or PDF document, which contains data about the product that needs to be processed and stored. To simplify importing this information, the proof-of-concept application transforms all of the formats offered by the suppliers to a single XML format.

Technologies used: *Java, JUnit, Maven, XPath, XSLT, and Apache Camel*

ISAAC 2014 - 2016

ISAAC creates custom web and mobile applications for a number of international customers, often using open-source software as a foundation.

GlobalCollect - October 2016 - February 2016

GlobalCollect was a global payment-service provider that is now part of Ingenico Group's Ingenico ePayments. Ingenico ePayments offers a platform for online payment processing.

In a team of 10 to 20 software developers, Luc worked as a back-end developer on a portal that simplifies the boarding process for new merchants.

Technologies used: *Java, Java EE, WebLogic, Maven, and JUnit*

Vogel's - October 2015

Vogel's is known globally for its range of mounting solutions for LCD, plasma and LED screens, audiovisual equipment, and tablets for different rooms at home.

Luc created a proof-of-concept iOS app that can be used to control a wall mount for a TV. The mobile device communicates with the wall mount via Bluetooth.

Technologies used: *Swift, Core Bluetooth, and Cocoa Touch*

Yelder - September 2015

Yelder is a financial institution that offers various forms of personal loans such as credit cards using a number of different brand names.

To simplify the process of registering for a personal loan for the purchase of a car, Luc worked on a web app in a team of three back-end developers and two front-end developers. The app makes it possible to easily and securely upload personal documents.

Technologies used: *Java, Java EE, JUnit, Maven, and JBoss EAP*

LaSer UK - April 2015 - December 2015

LaSer UK is a financial institution that offers branded credit cards and other forms of personal loans.

In a team of about 20 software developers, designers, and project managers, Luc worked on a new self-service portal that helped customers to manage their in-store credit.

Technologies used: *Java, Java EE, JUnit, Maven, JBoss EAP, and JBoss BRMS*

LaSer Netherlands and LaSer Nordic - December 2014 - February 2015

LaSer is an international financial organization that offers personal loans, for example in the form of branded credit cards.

For a number of existing self-service portals for customers with branded credit cards, Luc performed maintenance and solved production incidents.

Technologies used: *Java, Java EE, JUnit, Maven, and JBoss EAP*

LaSer UK - August 2014 - Februari 2015

LaSer UK is a financial institution that offers branded credit cards and other forms of personal loans.

In a team of around 10 software developers, Luc extended an existing self-service portal for customers with branded credit cards issued by LaSer UK.

Technologies used: *Java, Java EE, JUnit, Maven, and JBoss EAP*

GlobalCollect - March 2014 - June 2014

GlobalCollect was a global payment-service provider that is now part of Ingenico Group's Ingenico ePayments. Ingenico ePayments offers a platform for online payment processing.

Luc worked as an iOS developer on a native SDK that helps iOS developers to connect their apps to the Ingenico ePayments platform. In addition, he created a demo application to illustrate the use of the SDK and wrote its technical documentation.

Technologies used: *Objective-C, Cocoa Touch, AFNetworking, and SVProgressHUD*

Eindhoven University of Technology (TU/e) 2006 - 2014

The Eindhoven University of Technology (TU/e) is a research university specializing in engineering science and technology. Its education, research, and knowledge valorization contribute to solving the major societal issues and boosting prosperity and welfare, as well as the development of technological innovation in cooperation with industry. Furthermore, it enhances progress in engineering sciences through excellence in key research cores and innovation in education. As an employee of the Eindhoven University of Technology, Luc had the following positions:

Postdoc and Teacher - Laboratory for Quality Software - 2012 - 2014

As a postdoctoral researcher and teacher, Luc performed research in the field of safety-critical software and assisted in teaching a number of courses for BSc students. In addition, he co-supervised a PhD student.

Technologies used: *Python, jQuery, JavaScript, Epsilon, and Eugenia*

PhD Student - Software Engineering and Technology Group - 2008 - 2012

As a PhD student, Luc performed research in the field of model-driven software engineering and domain-specific languages. Additionally, he assisted in teaching a number of courses for MSc and post-MSc students.

Technologies used: *mCRL2, POOSL, Promela, ASF+SDF, ATL, Eclipse Modeling Framework, Xpand, Xtend, and Xtext*

Junior Researcher - TU/e and ASML - 2006 - 2008

In a joint project between the TU/e and ASML, Luc investigated the transformation of UML models to a formal modeling language capable of performance analysis.

Technologies used: *POOSL, ASF+SDF, Xpand, Xtend, and Xtext*

Education, Certifications, Training Courses

Education

- PhD (dr.), Eindhoven University of Technology (TU/e)
- MSc (ir.), Eindhoven University of Technology (TU/e)
- VWO, Jeanne D'Arc College Maastricht

Courses

- The World's Best Intro to TDD (J. B. Rainsberger)
- ISO 26262 Training Course (Intecs)
- Teaching and Learning in Higher Education (TU/e)
- The Art of Presenting Science (TU/e)
- Writing Articles and Abstracts (TUe/)
- Intercultural Communication (TU/e)
- Planning and Communication (TU/e)
- Deutsch als Fremdsprache (University of Innsbruck)
- Licht und Farbe für Informatiker (University of Innsbruck)
- Nonverbale Kommunikation (University of Innsbruck)
- Stress am Arbeitsplatz (University of Innsbruck)
- Einführung in die Psychologie (University of Innsbruck)
- Entwicklungspsychologie des Kindesalters (University of Innsbruck)

Certifications

- Oracle Certified Associate - Java SE7 Programmer I
- Oracle Certified Professional - Java SE7 Programmer II

Conferences

- Next Build, Eindhoven, the Netherlands, 2016, 2017, and 2018
- International Conference on Secure Software Integration and Reliability Improvement, Jeju Island, South Korea, 2011
- International Conference on Software Testing, Verification and Validation, Berlin, Germany, 2011
- Joint ERCIM Workshop on Software Evolution and International Workshop on Principles of Software Evolution, Antwerp, Belgium, 2010
- Workshop on Language Descriptions, Tools and Applications, York, United Kingdom, 2009
- Generative and Transformational Techniques in Software Engineering, Braga, Portugal, 2007

Talks and publications

- JSON Web Tokens (Java Meetup, October 2016)
- From Napkin Sketches to Reliable Software (PhD thesis, 2012)
- Checking Property Preservation of Refining Transformations for Model-Driven Development (Technical report, 2012)
- MDE Basics with a DSL Focus (Lecture notes, 2012)
- Extracting Models from ISO 26262 for Reusable Safety Assurance (Paper, 2013)
- Efficient Property Preservation Checking of Model Refinements (Paper, 2013)
- Incremental Formal Verification for Model Refining (Paper, 2012)
- VPDSL: A DSL for Software in the Loop Simulations covering Material Flow (Paper, 2012)
- Reusable and Correct Endogenous Model Transformations (Paper, 2012)
- Prototyping the Semantics of a DSL using ASF+SDF: Link to Formal Verification of DSL Models (Paper, 2011)
- Using a DSL and Fine-grained Model Transformations to Explore the Boundaries of Model Verification (Paper and technical report, 2011)
- An Exercise in Iterative Domain-specific Language Design (Paper, 2010)
- The Third Rewrite Engines Competition (Paper, 2010)
- Integrating Textual and Graphical Modeling Languages (Paper, 2009)
- Embedded Systems Modeling, Analysis, and Synthesis (Book chapter, 2007)
- A BDD-based Prover for mCRL2 (Master's thesis, 2006)

Workshops

- Elixir and Phoenix workshop (Kabisa, Weert, 2016)
- Elixir workshop (Kabisa, Weert, 2016)
- React workshop (Kabisa, Weert, 2016)

Languages

	Speaking	Writing
Dutch	Fluent	Fluent
English	Fluent	Fluent
German	Sufficient	Sufficient
French	Basic	Basic