Dr Alexander Bunkenburg

Scala Java web developer

alex@inspiracio.cat *www.inspiracio.cat*

Technically: Scala, Java, web. Role: mainly development. Prefer freelance. Modern informal company style. Prefer companies that make their own engine, over consulting companies. I value the ethical aspect: using technology to make lives better. Interesting: cryptocurrency, energy, or science.

Scala

- 1988-1999 Education and research at University of Glasgow based on lazy Functional Programming (Haskell)
- 1999-2018 Professional development in Object-Oriented Java.
- 2018 Passed the five Scala courses offered by EPFL on coursera.
- 2019 Complex Calculator: As practice, I re-write a Java app in Scala. Interactive graphical visualisation of complex number operations in 2D and 3D. In Scala: complex numbers, vectors and matrices, Swing GUI.
- I'm looking forward to working with Scala. Finally, functional-programming techniques, even with laziness, have arrived in commercial software development.

Java

- from Java 1.1 in 1997 to Java 11 in 2019
- applets, Swing, J2EE, servlets, JSP, Android, AEM
- Tomcat, JBoss, WebLogic, Google AppEngine
- JB261 JBoss for Advanced J2EE Developers
- SUN Certified Java Programmer (1.6) 2006 91%
- SUN Certified Java Associate (1.6) 2006 98%
- BEA Certified WebLogic 7.0 Developer 2002 97%
- BEA Certified WebLogic 6.0 Developer 2002 93%
- SUN Certified Java Programmer (1.2) 2000

web

- orange-servlet: open-source HTML5 templates with Java as server-side language
- html-servlet: open-source HTML5 templates with javascript as server-side language
- html-parser: open-source parser and object model for HTML5 in Java
- ECMAScript 262-3: In 2008 I wrote a parser and several engines for ECMAScript 262-3: interrupted executions with continuations, non-deterministic excution.

mobile

- 2011-2012 Android Development
- 2011 Software Architect at siine, where I directed design and implementation of an Android keyboard with a Java-server on Google AppEngine.
- 2012 Co-Founder and Software Architect at Mobile Jazz, development for Android and iOS.

survey engines

- Yellow: A new survey paradigm: The survey flow is modelled as a javascript program and the pages come from HTML5 templates. See www.yellow.cat. Personal project since 2013. Based on *continuations*. Uses rhino javascript which has continuations. I'd like to use Scala continuations.
- 2008-2011: I implemented a survey engine for netquest. Developed in Java: parser and several engines for JavaScript, client and server for a ReST protocol, web pages with AJAX, fat client using Java Swing. Apparently still working in 2017.

university

- 1992 BSc Maths & Computing Science at University of Glasgow
- 1997 PhD in formal software construction at University of Glasgow, supervised by J.M.Morris and Phil Wadler
- 1997-1999 Research: at University of Glasgow: "An Axiomatic Basis for Functional and Imperative Programming", with J.M.Morris
- 11 scientific publications, best is: "Term Transformers: A new approach to state", with J.M.Morris and M.Tyrrell. ACM Transactions on Programming Languages and Systems (2009) Volume 31 Issue 4, May 2009