




Dr. Werner Van Belle

Senior Software Developer

I am a software engineer with over 20 years of experience in developing applications with a high degree of algorithmic complexity and advanced mathematical concepts.

CAREER

- 11.13 – now **SENIOR SOFTWARE DEVELOPER**
 BpmDj – <http://bpmdj.yellowcouch.org/>  Grenzach / DE

A DJ Application which enables the user to create mixtapes using a visual 2D representation of each track. It was originally developed in C++ (in 2001). Starting 2013 I rewrote it in Java. The UI is written as a JavaFx and Android application. At the moment the software is about 176'000 LOC.

Keywords: Java, JavaFX, BCEL, Java Beans, Java Properties, SQL, JDBC, Android
- 07.11 – 10.13 **SENIOR SOFTWARE DEVELOPER**
 Des Pudels Kern  Köln / DE

Signal processing modules for the online audio workstation audiotool.com (in 2012 it had about 380'000 users). Some examples are an exciter, FM Synthesizer, paragraphic equalizer, stereo enhancing and more.

Keywords: AWS, Java, Actionscript, Scrum, Agile Development, (My)SQL
- 05.10 – 06.11 **CONSULTANT**  Grenzach / DE

Developing of Python Software to automatically analyze correlations.

Keywords: Python, Numpy, GLMnet, SWIG, C++
- 09.09 – 04.10 **TEACHING PROFESSOR**
 Duale Hochschule Baden-Württemberg  Lörrach / DE

Courses Bioinformatics (in C#), Mathematical Applications (in Maple, Mathematica, Matlab), Databases (SQL), Programming in C#
- 03.09 – 08.09 Migration Switzerland → Germany
- 03.08 – 02.09 **SENIOR RESEARCH ASSOCIATE**
 ETH Zürich  Basel / CH

Deep sequencing data analysis pipeline with a throughput of 16 Tb/3 days. The work entailed sample tracking, primary analysis (convert the measured signal to a genetic sequence), secondary analysis (count and combine all measurements), and tertiary analysis: find the sequences back in a relevant genome. This was done by accessing Ensembl.

Keywords: C, C++, SQL, Shell scripting, PHP, Web Development
- 01.08 – 02.08 Migration Norway → Switzerland

PERSONA

- Born: 21. Juni 1975
-  Kronacherstrasse 4B
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Germany
-  werner@yellowcouch.org
-  +49 7624 98 47 294
-  werner.yellowcouch.org

LANGUAGES

- Dutch
- English
- German

SOFT SKILLS

- Honest
- Resilient
- Pragmatic
- Autodidact
- Teampayer

- 03.07 – 12.07 **DATA ANALYSIS LABFORUM** ♥ Tromsø / NO
 University Clinic Northern Norway (UNN)
 Development of tools to perform network analysis of micro array measurements and implementing an online tool to perform analysis of Real Time PCR experiments. measurements.
 Keywords: PHP, Apache
- 04.04 – 03.07 **RESEARCHER** ♥ Tromsø / NO
 Norut IT
 Transfer knowhow on algorithms developed for NASA and ESA, into a bioinformatics context.
 Keywords: C, C++, Java, Python/Jython, Volpack, RSI IDL
- 10.03 – 03.04 Migration Belgium → Norway
- 10.97 – 09.03 **RESEARCHER & TEACHING ASSISTENT** ♥ Brussel / BE
 University Brussels, Computer Science Department
 Development of a software framework for embedded Systems (IOT) in cooperation with Agfa-Gevaert, Alcatel, Barco, Philips, Siemens Atea, RUG, LUC und KUL.
 Keywords: C, C++, Java, Scheme

ACADEMIC CAREER


- 1998 → 2003 **PHD** ♥ Brussel / BE
 Vrije Universiteit Brussel (VUB)
 Summa Cum Laude, september 2003
 Research on automatic interface generation for distributed systems using a machine learning approach.
- 1993 → 1997 **COMPUTER SCIENCE DEGREE** ♥ Brussel / BE
 Vrije Universiteit Brussel

SELECTED PUBLICATIONS & PRESENTATIONS

- August 2017 **PRESENTED AT SHA2017** ♥ Zeewolde / NL
 Time Stretching BpmDj
<http://werner.yellowcouch.org/Papers/sha2017/>
- November 2015 Zathras-1: time stretching audio through matrix-multiplication
<http://werner.yellowcouch.org/Papers/zathras15/index.html>
- August 2013 **PRESENTED AT OHM2013** ♥ Oudkarspel / NL
 Finding the K Nearest neighbors with ~30% data access in more than 1000 dimensional uniform spaces
<http://werner.yellowcouch.org/Papers/ohm13b/>
- March 2012 **NATURE ONCOGENE**

Correlation analysis of p53 protein isoforms with NPM1/FLT3 mutations and therapy response in acute myeloid leukemia

Nina Ånensen, Werner Van Belle, S.M. Hjelle, Ingvild Haaland, E Silden, Jean-Christophe Bourdon, R Hovland, K Taskén, S Knappskog, P.E. Lønning, Oystein Bruserud, Bjørn Tore Gjertsen; volume 31; pages 1533-1545

August 2011 **PRESENTED AT CCC2011**  Finowfurt / DE
Measuring Tempo, Extracting Rhythm & Composition
<http://werner.yellowcouch.org/Papers/cc11/>

May 2010 **DEVELOPMENTAL CELL**
A Combined Ex Vivo and In Vivo RNAi Screen for Notch Regulators in Drosophila Reveals an Extensive Notch Interaction Network
Abil Saj, Zeynep Arziman, Denise Stempfle, Werner Van Belle, Ursula Sauder, Thomas Horn, Markus Dürrenberger, Renato Paro, Michael Boutros, Gunter Merde; Elsevier; volume 18; pages 862-876

October 2007 An Adaptive Filter for the Correct Localization of Subimages: FFT based Subimage Localization Requires Image Normalization to work properly
<http://werner.yellowcouch.org/Papers/subimg/index.html>

May 2007 **GENE REGULATION AND SYSTEMS BIOLOGY**
Confidence Intervals on Microarray Measurement of Differentially Expressed Genes: A Case Study on the effects of MK5, TAF4 and FKRP on the transcriptome
Werner Van Belle, Nancy Gerits, Kirsti Jakobsen, Vigdis Brox, Marijke Van Ghelue, Ugo Moens; Libertas Academus Press; nr 1; pages 57-72

October 2006 **HANDBOOK FOR UBIQUITOUS AND MOBILE COMPUTING**
Ambient Actors as a Formalism for Ubiquitous and Mobile Computing
Werner Van Belle, Jessie Dedecker; American Scientific Publishers

Oktober 2006 **LINUX+ MAGAZINE**
Dj-ing under Linux with BpmDj
Werner Van Belle; Volume nr 25

SKILLS

PROGRAMMING LANGUAGES

C#	● ● ● ● ●
Java	● ● ● ● ●
C/C++	● ● ● ● ●
JNI	● ● ● ● ●
PHP	● ● ● ● ●
SQL	● ● ● ● ●
JDBC	● ● ● ● ●
Python	● ● ● ● ●
Prolog	● ● ● ● ●
Scheme/Lisp	● ● ● ● ●
Pascal	● ● ● ● ●
Latex	● ● ● ● ●
CSS	● ● ● ● ●
Regular expressions	● ● ● ● ●

Bash ● ● ● ● ●
 Maple ● ● ● ● ●
 Mathematica ● ● ● ● ●
 Matlab ● ● ● ● ●
 Octave ● ● ● ● ●

DATA FORMATS / PROTOCOLS

HTML/XML ● ● ● ● ●
 JSON ● ● ● ● ●
 Protobuf ● ● ● ● ●
 RMI ● ● ● ● ●
 Corba/IDL ● ● ● ● ●

FRAMEWORKS AND LIBRARIES

Swing ● ● ● ● ●
 JavaFX ● ● ● ● ●
 Java Beans/Properties ● ● ● ● ●
 Java Annotations ● ● ● ● ●
 Jlayer ● ● ● ● ●
 Java Protobuf (javame) ● ● ● ● ●
 Apache Byte Code Engineering Library ● ● ● ● ●
 Pytorch ● ● ● ● ●
 Numpy ● ● ● ● ●

SERVICES

MySQL ● ● ● ● ●
 PostgresSql ● ● ● ● ●
 Microsoft Access ● ● ● ● ●
 Apache Webserver ● ● ● ● ●

DEVELOPMENT ENVIRONMENTS

Intellij ● ● ● ● ●
 Android Studio ● ● ● ● ●
 Eclipse ● ● ● ● ●
 Netbeans ● ● ● ● ●

TOOLS AND METHODS

Git ● ● ● ● ●
 SVN ● ● ● ● ●
 CVS ● ● ● ● ●
 Scrum ● ● ● ● ●
 OTRS ● ● ● ● ●