

# Dr Joel F Guillod

Medical Doctor - dermatology and occupational medicine Clinical Information System and eHealth Expertise Software development and projects management

EASE IN

LEARNING

VISIONARY

Swiss citizen DoB: August 29, 1960 Married, 2 adult children

#### Contact

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#### Address (France)

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#### Address (Switzerland)

In der Wässeri 15 8047 Zürich

#### Languages:

- French : mother language.
- English : fluent (CEFR "advanced to mastery" C1-C2, evaluated in 2014).
- German: independant vantage (B2, evaluated in 2017).

### **PROFESSIONAL SKILLS**

**PERSONAL SKILLS** 

▶ **Strategy** – objectives, promotion, follow-up of projects portfolio.

PASSIONATE

ANALYTICAL

MIND

▶ Team Supervision (IT, medical).

**ENJOYS** 

CHALLENGES

TEAM

PLAYER

- ▶ Users' Need and Business Processes oriented Ambassador for stakeholders. Steering committees and working groups animation.
- ▶ Project Acquisition, fundraising, budget monitoring.

CURIOUS

- ▶ **Authoring** : specifications, project documentation, scientific publications.
- Medical Knowledge, Classifications and Technical Standards, ontologies, thesauri and classifications, including CIM9/10; CISP-2; HL7; SNOMED; Tarmed and Swiss-DRG; ISO 13606; DICOM; OpenEHR, etc.
- ▶ Ethical Standards in biomedical research (TRREE, 2013).
- Software Validation for medical devices.

### IT EXPERIENCE - EHEALTH

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in a nutshell

CREATIVE

- ▶ Connected Medical Devices Platform (IoT) with privacy by design.
- eHealth Project Management including Clinical and Hospital Information Systems (CIS, HIS): 30+ years of experiences in project and resources management, and teams coordination.
- ▶ Medical Diagnosis Expert System using **Artifical Intelligence** (1988-92).
- > Strong knowledge of Swiss Public Health System and eHealth. International collaborations with other European countries and Africa.
- ▶ Software Development (DevOps lifecycle, full stack).
- > Sales + Deployments of Electronic Patient Record (hospitals and offices).
- ▶ Applied R&D : Electronic Health Record (EHR), Telemedicine (with a telecom provider), connected medical devices (IoMD/IIoT), medical data exchange, skin imaging (including Swiss National Science Foundation and European Grants, in collaboration with IT Universities); cloud computing applied to clinical data.

## HEALTH / CLINICAL / RESEARCH EXPERIENCE

details on next page

- ▶ Senior Physician as a dermatologist; occupational medicine.
- Clinical Practice in hospitals and private office.
- ▶ Academic Teaching (Lausanne University Hospital).
- ▶ Scientific Research and Clinical Trials (Lausanne and Geneva University Hospitals).

#### PROFESSIONAL EXPERIENCE

overview			
	1986 – 1992	1992 – 2005	2006 – now
Medical practice	Internal medicine (Hospital of Neuchâtel)	Dermatology (HUG Geneva, CHUV Lausanne, Medical Office in Neuchâtel)	Dermatology, Occupational medicine
R&D	Electronic Health Record and expert system for medical practice (Hospital of Neuchâtel and Institute for Mathematics and Computer Science, University of Neuchâtel)	Skin Imaging (HUG, CHUV); Swiss National Science Foundation (2x)	European Foundation Interreg IIIA; CSEM Neuchâtel; Private Companies.
IT - eHealth		Electronic Health Record (Hospitals of Neuchâtel and Private Companies)	eHealth, Health information management (Geneva State, OFS/BFS, Private Companies,), IoT ( <u>eliiot-technology.ch</u> )

# Project and Team Management in Health IS / eHealth (since 1988)

- Private IT Companies and State Administrations (groupe .id, Yverdon, Switzerland; Statice-santé SA, Besançon, France), Canton of Neuchâtel (IT Dpt), State of Geneva (IT Dpt/DGSI), Swiss Federal Office for Statistics (OFS/BFS):
  - Project Manager for the design, development and maintenance of hospital patient records (EMR of 11 general hospitals and 2 psychiatry hospitals in Neuchâtel).
  - Projects manager for R&D and sales.
  - Methodology : HERMES (IT Steering Unit of the Swiss Confederation), SCRUM (agile method).
  - UX design (user experience / interface) and full stack Software development.
  - User training, Hotline.
  - Project teams coordination. Interaction with stakeholders: political bodies, policy makers, lawyers (**strategy**), users, developers (**development**) and production teams (**operational**).
  - Project Manager on Medical Classification and Coding for Outpatient Sector.

#### Specific Domains:

- Clinical Information System (CIS) and Hospital Information System (electronic patient records for hospitals and private offices, clinical and ancillary medical activity sectors, A&D, Finance): definition and implementation of strategy, analysis, design; project, change and risk management; testing and support, maintenance.
- Knowledge Management and knowledge integration to CIS.
- Telemedicine and patient data exchange between healthcare stakeholders (Swisscom provider and Canton of Neuchâtel).
- Connected patient (connected medical devices, **Agile Health Hub**) : in eliiot technology sàrl; R&D with CSEM/Neuchâtel (security and privacy).
- Skin imaging for early malignant melanoma detection.
- Business Intelligence (BI).
- Former Active Auditor in WG of the European Standardisation Centre (CEN  $^{\prime}$  TC251).

# <u>Head of Research</u> – CHUV (University Hospital of Lausanne) / EPFL (Swiss Federal Institute of Technology Lausanne) / HES (University of Applied Sciences) / Industry (1988 - 2016)

- ▶ In particular, two skin imaging projects supported by the Swiss National Science Foundation (SNF No. 32-53175.97 and 3152-061745), and one European INTERREG IIIA Fund (DECOPREME): implementation of a collaborative system for early detection of malignant melanoma with skin imaging and WEB technologies.
- ▶ Various industrial and University projects (see listing page 4).

# MD and Specialist in Dermatology – Instructor, Clinical Director and Practitioner. Hospitals of Neuchâtel, HUG (Geneva) and CHUV (Lausanne), private office (Neuchâtel) (1986 - 2010). Occupational medicine (since 2015).

- ▶ Senior Physician of the **Dermatology** Clinic at CHUV (1997-2010).
- ▶ Private Practice in Neuchâtel (2000-2005).
- ▶ Dermatology instructor (1997-2010).
- ▶ Medical training in Dermatology and Venereology, HUG (1992-1997).
- Occupational medicine for rescue service (SSSM SDIS), France (since 2015).
- Occupational medicine for workers and private companies (SPST), France (2021-now).

#### **MAJOR TRAINING AND QUALIFICATIONS**

- ▶ Software Validation for Medical Devices (IEC 62304), ARIAQ Institute (2019).
- ▶ Public Health Diploma (rescue service SSSM), University of Bordeaux / France (2017).
- Master Course in Health Information Management. Institute of Health Policy and Management, University Erasmus, Rotterdam/The Netherlands (Course 2003-4).
- **Examiner** for federal medical examinations, appointed by the Swiss BAG, 2004.
- Occupational medicine, University of Rouen, 2021-2024.
- ▶ Dermatology and Venereology, FMH Specialist, 1997.
- Doctor in Medicine (MD) degree at the University of Lausanne 1997. Thesis title: "Computerized Patient Record: challenges and implications of the exchange and sharing of data between partners in the health system".
- ▶ Management Training, Institute for Human Resource Development, Riex, 1993.
- ▶ Medical Diploma. Faculties of Medicine, Universities of Lausanne and Zurich, 1985.

#### ICT TOOLS AND MAIN METHODOLOGIES USED non-exhaustive

Office MS-Office, OpenOffice, iWork, Pages, Numbers, Keynote.

CMS Plone, Joomla, Hexo, Moodle (Learning Management System).

Project Management HERMES, SCRUM.

**ERP** .id business et .id medica (www.groupeid.ch/cms/.idmedica-

dossier\_medical\_integre), DIOHIS-MED.

Modelling UML, OMT, Merise. Business intelligence (BI).

Software Development and WEB Technology

**Lifecycle**: DevOps, agile, design patterns.

OOPS: Smalltalk, Java JEE, Ruby, Javascript (ES6), Actionscript3, Python.

Web: NodeJS, PHP, HTML5 (HTML/CSS/JS), XML, Adobe Flex, ¡Query,

ExpressJS, Twitter Bootstrap, etc.

**Web Frameworks**: Ruby on Rails, Sencha Touch/ExtJS, AngularJS, Vue.js/Quasar. **Databases**: SQL (Oracle; MySQL; Postgresql) and NoSQL (Apache CouchDB;

MongoDB), WebObjects, Apache Lucene/SolR.

IDE: Visual Studio Code, Eclipse, XCode, Borland Jbuilder, NetBeans,

CodeWarrior, Revolution (runrev), RealBasic, Adobe Flex Builder.

Other programming languages: Eiffel, Fortran, Pascal, Basic, Hypercard/Hypertalk.

**Security/Privacy** OpenPGP, TLS/SSL, cryptography, firewall.

**Technology watching** always learning and inquiring on technology (software, hardware,

IoT).

List of **scientific publications and lectures** is enclosed or can be downloaded from <u>www.imed.ch/cv/publications-en.pdf</u>.

#### LIST OF MAIN REALISATIONS AND POSITIONS

- Agile Health Hub: a private cloud for connected medical and IoT devices (Home Care, Medical Office).
- **IoT Gateway** for connected Health: patients' data acquisition with connected devices (IoT) and data integration with third parties systems (cloud, EHR, etc.) (2015 ongoing <a href="https://www.eliiot-technology.ch">www.eliiot-technology.ch</a>).
- Patient Data Analysis: Data Intelligence and BI (2016).
- **Telemedicine**: full-stack development, e.g. Server and Smartphone Apps (2011-16).
- EHR for Medical Offices: development and marketing of HaptoMED software for private physicians: billing (1989-2003) and medical record (1990-2014).
- Consultant for eHealth Projects at Groupe ID Informatique & Développement Nouvelles Technologies (Yverdon, Marin et La Chaux-de-Fonds): EHR for Home Care and Medical Offices (since 1999).
- Analysis towards a Notifiable Infectious Diseases Information System (State of Geneva, 2009).
- User Needs Analysis, IS Redesign and Change Management Assessment for the administrative and clinical applications of the Office Médico-Pédagogique (OMP) (State of Geneva, 2009).
- Design of Education and Training Courses in dermoscopy for the Clinic of Dermatology (CHUV, 2006-9).
- **DECOPREME System for Early Detection of Melanoma on Internet**: as Swiss Manager for a European Project, INTERREG IIIA Switzerland-France (with CHUV in Lausanne, ID Informatique & Développement Nouvelles Technologies SàRL in Yverdon, CHUB in Besançon/France, Laboratory of Informatics of the University of Franche-Comté LIFC in Besançon, Statice-santé SA in Besançon) (2006-8).
- Open Internet Platform for Distributed Image Processing (cloud computing). Application to dermoscopy for malignant melanoma screening (2002-4, 2013-14).
- Director for a research project on skin imaging supported by the Swiss National Science Foundation (FNS) n° 3152-061745. CHUV – EPFL Collaboration (2001 – 2004)
- Director for a research project on skin imaging supported by the **Swiss National Science Foundation** (FNS) n° 32-53175.97. CHUV EPFL Collaboration (1998 2000).
- Business Analyst Expert for University of Applied Science (research or diploma works), including:
  - Validation System for Drug Prescriptions (ISBE/Berne, 1989).
  - «DENIPS» Project : a Clinical Information and Communication System (ISBE/Berne, M. J. -G. Gander, 1992).
  - User Interface Modeling in porting a Medical Diagnosis Expert System to INTERNET (ISOe/ Oensingen, 1997-98).
  - Digital Dermoscopy Analysis (HEG/Genève, 2004).
- Clinical Information System (CIS, EHR) in Canton of Neuchâtel Hospitals: analysis and specifications of user's needs and business processes, design, prototyping, coordination tasks between users and IT team, tests, deployment, Ethical Rules on Ownership and Usage of Data (1988-2001).
- Electronic Documents Communication between Practitioners and Hospitals: a Project initated by Swisscom Telecom Company on «Templates Towns for Communication» (french: «Communes Modèles pour la Communication») to build a model of (Neuchâtel, 1992).
- Auditor and Expert in WGs of the Technical Committee on Health informatics of the European Centre for Normalisation (CEN/TC 251, Bruxelles/Belgique, 1990-92).
- Medical Diagnosis Expert System using Artifical Intelligence (AI): implemented in SmallTalk-80 (partnership between the Department of Medicine of Neuchâtel Hospitals and the Institute of Mathematics and Computer Science of the University of Neuchâtel, 1988-90).