

Pascal Brandt

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PROFILE

I am a computer scientist and digital health systems engineer working as a foreign Fulbright Scholar on a PhD in Biomedical & Health Informatics. For the past eight years my focus has been on researching, developing and implementing software and systems for healthcare. This has taken the form of full-time work for non-profit organizations, volunteer contributions and academic research.

I have a strong interest in researching new and innovative ways to solve problems specific to healthcare, across all areas of the software development lifecycle, including research, implementation, and evaluation.

EDUCATION

University of Washington — PhD Biomedical Informatics, 2021 (expected)

University of KwaZulu-Natal — MSc Computer Science, 2014

Stellenbosch University — BScHons Computer Science (Cum Laude), 2006

Stellenbosch University — BSc Mathematical Sciences (Cum Laude), 2005

Rondebosch Boys High School — Matric Certificate (With Distinction), 2002

PUBLICATIONS

Brandt, P. *et al.* (2014). *An Investigation of Classification Algorithms for Predicting HIV Drug Resistance Without Genotype Resistance Testing*. In FHIES, Volume 8315, pages 236–253. Springer Berlin Heidelberg.

http://link.springer.com/chapter/10.1007/978-3-642-53956-5_16

Brandt, P. (2014). *An Investigation Of Multi-label Classification Techniques For Predicting HIV Drug Resistance In Resource-limited Settings*. MSc Dissertation.

<https://psb.re/msc>

EMPLOYMENT EXPERIENCE

University of Washington — October 2016 - Present

University of California, San Francisco — May - September 2016

Previously for UCSF, and now for UW, I am part of a team of developers working on health information systems in Mozambique. As the infrastructure lead, I develop processes and implement systems designed to increase the quality of software delivered by the development team. I also manage the integrated communication and project management tools.

Stripe Open-Source Grantee, Stripe, San Francisco — January - April 2016

Worked on the OpenMRS JavaScript ecosystem as part of the [Stripe Open-Source retreat](#). The bulk of work was done improving the functionality and documentation of the RESTful web services provided by OpenMRS. A JavaScript client library for OpenMRS was also produced.

Lead Software Developer, Jembi Health Systems — April 2009 - January 2016

Jembi develops open source information systems for healthcare in developing countries. In this role I was responsible for all the components of software systems development including requirements gathering, design, development, testing as well as implementation. I was also involved in researching new technologies and how they could be applied to deliver better healthcare.

The role required collaborating with users, in-country implementing partners as well as building capacity in local developers and technical staff by running training workshops and providing ongoing technical support. As part of a start-up and growing NGO, I also supported internal capacity building, and planning and monitoring of processes to optimise donor funding.

For my final three years at Jembi I was focused on working on projects in Mozambique, including development and implementation of both patient and aggregate level health systems, as well as health data integration infrastructure. A core objective was to make relevant data available to various stakeholders at the right time, in order to facilitate decision making to improve patient and population health outcomes.

Software Developer, Postilion Inc — December 2006 - March 2009

Postilion develops realtime financial systems. I worked primarily as a developer working from specification in this role, but was also a member of the quality assurance (QA) team for a short while as well as the primary member of the 3rd level support team for the product I was involved in. I was release manager for one of the major releases of the product.

Tutor, Stellenbosch University — July 2003 - November 2006

From my second semester of university I worked as a computer science tutor for first year students. Later this expanded to include second and third year students. The role involved sitting in on practical sessions and helping students understand and implement the concepts that they were being taught at the time.

SELECTED CONFERENCE PARTICIPATION

Medinfo 2010, Cape Town, South Africa

I attended MedInfo 2010 representing Jembi Health Systems. We had a booth on the exhibition floor where we successfully demonstrated a Microsoft Biztalk based Health Information Exchange that connected multiple disparate systems using IHE interoperability profiles.

Foundations of Health Information Engineering and Systems 2013, Macau

I presented my masters work as a peer reviewed conference paper entitled *An Investigation of Classification Algorithms for Predicting HIV Drug Resistance without Genotype Resistance Testing*.

IHE Connectathon 2017, Cleveland, Ohio, USA

I represented UW and the CDC and tested various IHE interoperability profiles with numerous other health information system vendors.

HIMSS 2017, Orlando, Florida, USA

Again representing UW and the CDC, our group demonstrated (among other things) a SMART on FHIR app that I developed, which integrated public health data and educational material into the Epic EHR system at the point of care.

AMIA 2017, Washington, D.C., USA

I presented two posters, one on the my long-running project in Mozambique and one for the AMIA student design challenge, in which our team was selected as a finalist.

AWARDS & HONORS

Fulbright Scholarship 2016 - 2018

South African National Research Foundation Doctoral Scholarship 2016 - 2019

AMIA Student Design Challenge finalist 2017

VOLUNTEERING

Community & Infrastructure Teams, OpenMRS — November 2014 - Present

In my role as regional community manager for the Europe, Middle East and Africa regions, I am responsible for helping new and existing members in the region access the community and make full use of its resources. I also support members in establishing their own country-wide communities and act as ambassador of those communities to the global OpenMRS leadership.

This position comes after contributing to the OpenMRS project as a volunteer since 2009. The experience has brought me in touch with leading experts from across the world, who are passionate about using their skills to support better healthcare through open source tools.

As of August 2016, I am also on the OpenMRS infrastructure team, which is responsible for maintaining all production and staging servers and systems used by the community.

Mentor, Google Summer of Code, OpenMRS — 2010, 2014 - 2017

The Google Summer of Code program provides stipends to students of tertiary education institutions to work on open source projects. I have acted as mentor on multiple occasions for students donating time during their summer breaks to code on OpenMRS. This task involves technical mentorship as well as guidance on how to interact with members of distributed and multicultural virtual communities.

Volunteer Wildfire Fighter, May — December 2015

Working closely with other emergency service organisations in wildland fire management such as Table Mountain National Park, CapeNature, Cape Town Fire & Emergency Services, Disaster Management, Winelands Fire Brigade, Stellenbosch Fire Brigade and Working on Fire has meant that the VWS has, to date, achieved over 39,000 active fire fighting hours between its members and stations.

OTHER INTERESTS

I have been a member of the Mountain Club of South Africa and have volunteered as a wildfire fighter. I enjoy hiking, rock climbing and running. Travelling with my wife and friends to experience new places and people is another important part of my life.

I am an avid reader who enjoys the classics, science fiction writing as well non-fiction.