

EXPERTISE

Health Information Systems
User-Centred Design

Data Analytics
Education

EDUCATION

- **The University of British Columbia**

2011- 2019

Ph.D., Electrical and Computer Engineering - Vancouver, British Columbia, Canada.

Thesis: *A User-Centred Approach to the Design of Novel Computer Systems, A Case Study of Home and Community Wound Documentation.*

Program focus: User-Centred Design, systems integration, wearable technologies, speech recognition, data analysis and machine learning, and healthcare.

M.Sc., Information Technology Engineering.

2009-2011

Thesis: *Lung Cancer Progression Assessment Using Non-Rigid Image Registration.*

Program focus: Web architecture, medical image processing, Business Process Reengineering, and Management Information Systems.

B.Sc., Computer Science and Education.

2004-2008

Thesis: *An Advanced Information System for Governmental Organizations.*

Program focus: Software systems analysis, programming, network applications, and education.

EXPERIENCE

- **Senior Software Engineer**

2022-Present

HP - Vancouver, BC, Canada.

Role: Technical ownership and building Infrastructure as Service applications in a containerized cloud environment. Develop and maintain CI/CD and cross-platform build pipelines. Work primarily with Go, Node.JS, Kubernetes, AWS/GCP and other cloud development tools.

- **Senior Software Developer**

2020-2022

First Nations Financial Management - Vancouver, BC, Canada.

Role: Leading software development involving internal and external teams. Designing architecture, building, and deploying financial management, CRM, and other software to support thousands of First Nations clients. Transitioning towards mobile and cloud stacks. Using Node.JS, React Native, SQL, and PHP.

- **Research Technologist**

2020-2021

School of Nursing, University of British Columbia - Vancouver, BC, Canada.

Role: Conducting research activities to investigate uses of telehealth before, during, and after pandemics such as disease outbreaks. Literature review, data collection, qualitative and quantitative analysis of data, and preparing manuscripts independently and in collaboration with a team of researchers.

- **Systems Consultant - Architect and Developer**

2019-2020

Provincial Health Services Authority - Vancouver, BC, Canada.

Role: Designing architecture, developing, and deploying an enterprise level platform for patient health records analytics, in a multimillion dollar project (BC Support Unit). Integrating data sources to be used by multiple organizations including the ministry of health. Liaising with stakeholders and adapting project strategy to meet needs. Using Java, SQL, cloud, and data integration tools.

- **Senior Applications Analyst (Domain Manager)**

2018-2019

Provincial Health Services Authority - Vancouver, BC, Canada.

Role: Setting requirements, development, and management of enterprise level clinical software systems in a multibillion dollar project (CST). Designing and building infrastructure for business intelligence and data virtualization. Extracting and analysing massive amounts of data for evaluation and optimization. Managing applications that serve thousands of clinicians and staff across the province of British Columbia. Using Cerner, SQL, business intelligence, and data virtualization tools.

- **Research Assistant**

2011-2018

Media and Graphics Interdisciplinary Centre (MAGIC), and Human Communication

Technologies Laboratory (HCT), University of British Columbia - Vancouver, BC, Canada.

Role: Research and development of user-centred and distributed web systems for bedside patient data collection in home and community healthcare. User testing the finished platform with clinicians and receiving extremely positive feedback. Mentoring and supervising student projects. Using Java, Android, SQL, middleware, speech recognition, and wearable technology tools.

- **Teaching Assistant** 2014-2018

Department of Electrical and Computer Engineering, University of British Columbia - Vancouver, British Columbia, Canada.

Role: Training, assisting, and evaluating students, with a focus on best practices in software engineering. Courses such as Software Engineering (EECE 310), and Human Computer Interfaces in Engineering Design (CPEN 441). Using Java and C++ tools.

- **Web Architect and Developer** 2017-2018

Collaborative for Advanced Landscape Planning (CALP), University of British Columbia - Vancouver, British Columbia, Canada.

Role: Lead designer and developer of backend and frontend of web toolkits for renewable energy solutions. Managing change to user-centred design and implementation. User testing the final platform with extremely positive feedback. Using Node.js and interactive maps tools.

- **Senior Software Engineer** 2015-2017

TTT Studios - Vancouver, British Columbia, Canada.

Role: Principal engineer responsible for design, development, integration, test, and maintenance of large scale web and mobile software projects. Successfully delivering high quality software products to local and international clients in secure and encrypted communication, healthcare, entertainment, finance, and education. Leading projects from start to finish with a focus on Agile methodology. Using Java, Node.js, Android, SQL, NoSQL, encryption, and cloud tools.

- **Research Assistant** 2009-2011

Electronic Systems Lab.

Role: Research and development of medical image processing applications for lung cancer progression assessment. Using C++ tools.

- **Founder and software developer** 2006-2008

Freedomsoft Solutions.

Role: Business development and project management, designing software systems and actively participating in product development for warehousing and accounting solutions. Using .Net tools.

- **Teacher** 2008

Middle school.

Role: Teaching basic computer and programming skills to middle school students.

FUNDING AND HONORS

- **Helen Shore Grant** 2016-2019

Awarded by School of Nursing at UBC. This fund is primarily intended to advance high quality research in nursing care related to adults, especially senior adults living with chronic conditions. It was used to support costs of experiments and publication.

- **IHSPR Institute Community Support Award** 2016

Awarded by Canadian Institutes of Health Research. This fund was given to support travel and sharing of strategic research at top tier conferences that align with the institute's mandate, advance professional development, and knowledge translation initiatives in health services and policy research.

- **Sir Quo-Wei Lee Fellowship** 2014

Awarded by St. John's College at UBC. This fellowship was in recognition of outstanding academic achievements and service to the community of graduate students who were members of St. John's College.

- **Graduate Student Travel Award** 2014

Awarded by Faculty of Graduate Studies at UBC. The funds from this award were used to support registration and traveling cost for academic conferences.

- **ICICS Travel Grant** 2014
 Awarded by Institute for Computing, Information and Cognitive System (ICICS) at UBC. This grant was to support costs of attending, presenting, and publication of peer reviewed papers at academic conferences.
- **N. H. Benson International Graduate Award** 2013
 Awarded by St. John's College at UBC. A highly competitive award given to only one candidate among tens of graduate students, in recognition of outstanding academic achievements.
- **Li Pai Lin Memorial Graduate Scholarship** 2013
 Awarded by St. John's College at UBC. Scholarship given in recognition of leadership in the community of graduate students.
- **BRAVA Initiative HQP Fund** 2012-2015
 Awarded by MAGIC, MITACS, GRAND NCE, and Boeing at UBC. Funding given to highly qualified persons in the Brazil Visual Analytics initiative (BRAVA). This was to foster international exchange and collaboration between Canadian and Brazilian academic institutions. As well to support research focused on mobile visual analytics for medical and healthcare applications.
- **Four Year Fellowship (4YF)** 2011-2015
 Awarded by faculty of graduate studies at UBC. Given to graduate students who demonstrate highly exceptional talent and academic achievements. The only recipient among several dozens of candidates in the Biomedical Engineering program at the Electrical and Computer Engineering department.
- **International Tuition Award** 2011-2019
 Awarded by the Faculty of Graduate Studies at UBC. Supplementary funding given in recognition of continued academic success and to support international students.

PUBLICATION AND PRESENTATIONS

- Dawood Al-Masslawi**, Kira Schaab, Lindsay Burton, Matthias Gorges, Kathy Rush, Leanne M. Currie, "The Use of Virtual Health During and After a Disease Outbreak Disaster - A Rapid Review and Research Recommendations," *To be submitted to a medical informatics journal*.
- Dawood Al-Masslawi**, Sidney Fels, Rodger Lea, Leanne M. Currie, "Mapping of Workarounds to Design Principles in Home Wound Care," *To be submitted to Journal of Healthcare Informatics Research (invited submission)*.
- Dawood Al-Masslawi**, Sidney Fels, Rodger Lea, Leanne M. Currie, "Home and Community Nurses' Workarounds in Wound Care Management," *To be submitted to International Journal of Medical Informatics*.
- Dawood Al-Masslawi**, Sidney Fels, Rodger Lea, Leanne M. Currie, "User-Centered Mapping of Nurses' Workarounds to Design Principles for Interactive Systems in Home Wound Care," *5th IEEE International Conference on Healthcare Informatics, Park City, Utah, 2017*.
- Dawood Al-Masslawi**, Charlene E. Ronquillo, Lori Block, Shannon Handfield, Sidney Fels, Rodger Lea, Leanne M. Currie, "SuperNurse: Nurses' Workarounds Informing the Design of Interactive Technologies for Home Wound Care," *11th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth), Barcelona, Spain, 2017*.
- Dawood Al-Masslawi**, Sidney Fels, Rodger Lea, Leanne M. Currie, "Nurse-Centred Design: Homecare Nursing Workarounds to Fit Resources and Treat Wounds," *21st International Conference on Engineering Design, Vancouver, British Columbia, 2017*.
- Dawood Al-Masslawi**, Lori Block, Charlene E. Ronquillo, "Adoption of Speech Recognition Technology in Community Healthcare Nursing," *13th IMIA International Congress on Nursing and Allied Health Informatics (IMIA-NI), Geneva, Switzerland, 2016 (winner of top 8 projects)*.
- Dawood Al-Masslawi**, Leanne M. Currie, Sidney Fels, Rodger Lea, "Use of Documentation Systems and Community Nurses' Problem Solving for Wound Care Management," *16th e-Health Annual Conference and Tradeshow, Vancouver, British Columbia, 2016 (winner of top 10 e-posters)*.
- Dawood Al-Masslawi**, Sidney Fels, Rodger Lea, Leanne M. Currie, "Recording Events, Interactions, and Annotations to Communicate Reasoning in Medical Situations," *Workshop on Ubiquitous Technologies for*

Augmenting the Human Mind, at the 14th ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp), Seattle, USA, 2014.

Dawood Al-Masslawi, Sidney Fels, Rodger Lea, Leanne M. Currie, “Ubiquitous Capture and Augmented Access (UbiCA), A Study for Decision Support in Chronic Care,” *5th Annual GRAND Conference, Ottawa, Canada, 2014.*

Dawood AlMasslawi and Ehsanollah Kabir, “Using Non-Rigid Image Registration and Thin-Plate Spline Warping for the Lung Cancer Progression Assessment,” *IEEE International Conference on Computer Science and Automation Engineering, Shanghai, China, 2011.*

Dawood AlMasslawi and Ehsanollah Kabir, “Change Detection of the Lung Cancer Using Image Registration and Thin-Plate Spline Warping,” *3rd International Conference on Digital Image Processing, Chengdu, China, 2011.*

Zahraa AlMasslawi and **Dawood AlMasslawi**, “A New Ontology for Fault Tolerance in QoS Enabled Service Oriented Systems,” *IEEE International Conference on Computer Science and Automation Engineering, Shanghai, China, 2011.*

COMMUNITY AND VOLUNTEERING

- **Designing for People Research Cluster, UBC.** 2018-2019

Role: Member of the research cluster. Multidisciplinary collaboration to produce people-centred research. Participating in presentations and workshops.

- **Social Justice Committee, St. John’s College, UBC.** 2011-2014

Role: Chair of the committee. Organizing talks and other events for students and faculty, with a focus on social justice issues in Canada and internationally.

- **Academic Support Committee, St. John’s College, UBC.** 2012-2014

Role: Chair of the committee. Organizing and running workshops to assist graduate students who are struggling with academic and personal life.

- **Biomedical Engineering Graduate Association at UBC.** 2012

Role: Treasurer elected by members. Managing funds and liaising with the department to secure funds for student needs.

- **Insight Toolkit (ITK) open source project.** 2010-2011

Role: Volunteer and contributor to the community of researchers focused on medical image processing and open source knowledge generation.
