

## HAMMAN W. SAMUEL

Email: [hamman.samuel@gmail.com](mailto:hamman.samuel@gmail.com) Website: [www.hwsamuel.com](http://www.hwsamuel.com)

### PROFESSIONAL EXPERIENCE

---

**Senior Analyst, BioWare Corp.**, Edmonton, Canada (*Current Position*).

- Responsible for data analytics, game analytics, data modeling, forecasting, research and mentoring as part of the Electronic Arts (EA) Global Analytics & Insights (GAI) team.

**Research Assistant, University of Alberta**, Edmonton, Canada, September 2010 – April 2018.

- Developed health social network for patients and medics using PHP, SQL, JavaScript/AJAX, Python, with trust-preserving privacy controls and trust metrics for evaluating veracity using machine learning and algorithmics.

**Machine Learning Consultant, Stream Technologies Inc.**, Edmonton, Canada, January 2017 – December 2017.

- Provided technical consultation on predictive solutions using linear regression for large-scale datasets containing image meta data, and coded custom Python scripts for feature extraction, anomaly detection, and clustering.

**Data Science Intern, Resolver Inc.**, Edmonton, Canada, August 2013 – May 2014.

- Worked with large-scale datasets in Microsoft SQL Server to analyze and identify emerging patterns and designed customized machine learning solutions for data warehouse analytics and prediction.

**Software Contractor, HQ Group Inc.**, Canada, October 2010 – November 2015.

- Programmed mobile and web-based applications for image processing and OCR with server-side programming in C# and ASP.NET and database development with Microsoft SQL Server.

**Web Developer, Canadian Writing Research Collaboratory**, Canada, January 2013 – March 2015.

- Created web-based application for geo-spatial visualization of large-scale datasets of literary research with server-side code in PHP & client-side code in JavaScript, including support for RESTful APIs.

**Software Engineer, American University of Nigeria**, September 2005 – April 2009.

- Worked with team to design, test, deploy and maintain enterprise software for academic data management & decision support, including web-based applications and desktop client applications using VBA, PHP, and SQL.

### EDUCATION

---

**PhD** Computing Science, University of Alberta, September 2011 – Present.

**MSc** Computing Science, University of Alberta, September 2009 – August 2011.

**BSc** Computer Science, American University of Nigeria, September 2005 – April 2009.

### TECHNICAL EXPERTISE

---

Database Technologies – MySQL/MariaDB, MongoDB, Microsoft SQL Server, OLAP Cube.

Machine Learning Toolset – Keras, Google TensorFlow, Theano, Gensim, Scikit-Learn.

Software Engineering – Object Oriented Programming, Rapid Application Prototyping, Design Patterns, UML.

Server- & Client-Side Languages – Python, Java, C#, JavaScript/AJAX, PHP, ASP, VBA, SQL.

IaaS and PaaS Cloud Computing – OpenShift, Heroku, Digital Ocean, Cybera, Microsoft Azure.

### LEADERSHIP AND AWARDS

---

President, Computing Science Graduate Student Association, University of Alberta, Canada (2014 – 2015).

Chief Returning Officer, Graduate Students' Association, University of Alberta, Canada (2014 – 2015).

Vice President, American University of Nigeria Honors Society (2007 – 2009).

Professional Development Award, University of Alberta, Canada (2011, 2013, 2015, 2017).

Doctoral Recruitment Scholarship, University of Alberta, Canada (2011 – 2012).

Mary Louise Imrie Graduate Student Award, University of Alberta, Canada (2010).

## PEER-REVIEWED PUBLICATIONS

---

**A Study of Canadian Tweeters and Context Prediction in Health Social Media using Applied Machine Learning.** Hamman Samuel, Benyamin Noori, Sara Farazi, Osmar Zaiane. In *Proceedings of the IEEE/WIC/ACM International Conference on Web Intelligence (WI)*. Santiago, Chile, December 4-6, 2018 [To Appear].

**MedFact: Towards Improving Veracity of Medical Information in Social Media using Applied Machine Learning.** Hamman Samuel, Osmar Zaiane. In *Proceedings of the 31st CAIAC Canadian Conference on Artificial Intelligence (CAI)*. Toronto, Canada, May 8-11, 2018. [LCNS 10832].

**Iron Mask: Trust-Preserving Anonymity on the Face of Stigmatization in Social Networking Sites** Hamman Samuel, Osmar Zaiane. In *Proceedings of the 14th International Conference on Trust, Privacy & Security in Digital Business (TrustBus)*. Lyon, France, August 28-31, 2017. [LCNS 10442].

**PubMedReco: A PubMed Citations Recommender System for Real-Time Chat (Student Paper Award 2nd Place).** Hamman Samuel, Osmar Zaiane. In *Proceedings of the 16th IMIA World Congress on Medical and Health Informatics (MedInfo)*. Hangzhou, China, Aug 21-25, 2017.

**Community Question Retrieval in Health Forums.** Hamman Samuel, Mi-Young Kim, Sankalp Prabhakar, Mohamed Shazan Mohamed Jabbar, Osmar Zaiane. In *Proceedings of the IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*. Orlando, Florida, USA, February 16-19, 2017.

**Supporting Digital Epidemiology in Alberta via Twitter Tracking.** Hamman Samuel, Osmar Zaiane, Patricia Martz. Presented at the *IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*. Orlando, Florida, USA, February 16-19, 2017.

**BubbleNet: An Innovative Exploratory Search and Summarization Interface with Applicability in Health Social Media (Best Paper Award).** Saeed Mohajeri, Hamman W. Samuel, Osmar R. Zaiane, Davood Rafiei. In *Proceedings of the 1st International Conference on Digital Economy (ICDEC)*. Carthage, Tunisia, April 28-30, 2016.

**Golden Retriever: Question Retrieval System.** Hamman W. Samuel, Mi-Young Kim, Sankalp Prabhakar, Mohamed Shazan Mohamed Jabbar. In *Proceedings of the IEEE International Conference on Healthcare Informatics (ICHI)*. Dallas, Texas, USA, October 21-23, 2015.

**A Repository of Codes of Ethics and Technical Standards in Health Informatics.** Hamman W. Samuel, Osmar R. Zaiane. *Online Journal of Public Health Informatics (OJPHI)*. Vol. 6, No. 2, October 2014. [Indexed in PubMed Central]

**On Management of the Health Content Lifecycle.** Hamman W. Samuel, Osmar R. Zaiane. *International Journal of Public Health Frontier (PHF)*. Vol. 2, No. 2, June 2013.

**Evidence-Based Trust Metrics in Web Services.** Hamman W. Samuel. In *Proceedings of the IBM International Conference on Computer Science Software Engineering (CASCON)*. Markham, Canada, November 18-20, 2013.

**Findability in Health Information Websites.** Hamman W. Samuel, Osmar R. Zaiane, Jane Robertson Zaiane. In *Proceedings of the IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*. Hong Kong/Shenzhen, China, January 5-7, 2012.

**PSST... Privacy, Safety, Security, and Trust in Health Information Websites.** Hamman W. Samuel, Osmar R. Zaiane. In *Proceedings of the IEEE-EMBS International Conference on Biomedical and Health Informatics (BHI)*. Hong Kong/Shenzhen, China, January 5-7, 2012.

**HCMS: Conceptual Description of a Health Content Management System.** Hamman W. Samuel, Osmar R. Zaiane. In *Proceeding of the 3rd Workshop on Software Engineering in Health Care (SEHC)*. Honolulu, USA, May 22-23, 2011.

**Fastest Association Rule Mining Algorithm Predictor (FARM-AP).** Metanat HooshSadat, Hamman W. Samuel, Sonal Patel, Osmar R. Zaiane. In *Proceedings of the 4th International C\* Conference on Computer Science and Software Engineering (C3S2E)*. Montreal, Canada, May 16-18, 2011.

**Towards a Definition of Health Informatics Ethics.** Hamman W. Samuel, Osmar R. Zaiane, Dick Sobsey. In *Proceeding of the 1st ACM International Health Informatics Symposium (IHI)*. Arlington, Virginia, USA, November 11-12, 2010.