

LAKSHIKA BALASURIYA

MSC. STUDENT IN COMPUTER SCIENCE – KNO.E.SIS CENTER – WRIGHT STATE UNIVERSITY
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RESEARCH INTERESTS

User Profile Identification, Emoji Analysis, Data/Text Mining & NLP, Machine Learning

EDUCATION

<i>Present</i> JANUARY 2016	MSC. IN COMPUTER SCIENCE, Wright State University , Dayton, OH, USA Thesis: “Finding Street Gang Members on Twitter: A Content-based Approach” Advisors: Prof. Amit P. Sheth & Dr. Derek Doran GPA: 3.93/4.0
DECEMBER 2015 SEPTEMBER 2011	PHD. IN COMPUTER SCIENCE, Wright State University , Dayton, OH, USA DROPPED OUT
SEPTEMBER 2009 FEBRUARY 2005	B.Sc.(Sp)(Hons) in INFORMATION TECHNOLOGY <i>Second Upper Class Honours</i> University of Moratuwa , Katubbedda, Sri Lanka Thesis: “SATHKAARA – A Haematology Decision Supporting System” GPA: 3.65/4.2

RESEARCH EXPERIENCE

<i>Present</i> JANUARY 2016	RESEARCH ASSISTANT, KNO.E.SIS CENTER – WRIGHT STATE UNIVERSITY <i>Finding Gang Members on Twitter</i> In this project, we try to understand how street gang members (self-identified street gang members on Twitter) use social media. We have developed machine learning models to automatically identify street gang members’ Twitter profiles using the content they share on social media (such as tweets and YouTube videos), profile descriptions, profile/cover images, and their emoji usage. <i>EmojiNet and Emoji Understanding</i> The goal of this project is to build tools and algorithms to improve machine understandability of emoji. We built the first machine-readable sense inventory for emoji called EmojiNet and currently working on emoji similarity and emoji sense disambiguation applications. <i>Context-Aware Harassment Detection on Social Media</i> The aim of this project is to develop comprehensive and reliable context-aware techniques to glean information about the people involved and their interconnected network of relationships to determine and evaluate potential harassment and harassers. My work focuses on automatically classifying aggressive tweets posted on Twitter.
DECEMBER 2015 SEPTEMBER 2011	<i>Contrast Pattern Mining Aided Clustering</i> I explored developing a contrast pattern-based clustering algorithm for Abbreviation Disambiguation in unlabelled clinical data. I have also worked on contrast pattern aided Ontology Alignment (focused on classes) for Linked Open Data.

WORK EXPERIENCE

APRIL 2016 AUGUST 2012	Graduate Teaching Assistant <i>Wright State University, Dayton, OH FALL 2012</i> Worked as a Teaching Assistant for CEG-2350 Operating Systems and Concepts course while teaching and grading all labs.
JULY 2011 NOVEMBER 2009	Software Engineer <i>Lanka Communication Services (Pvt) Ltd, Colombo, Sri Lanka</i> Involved in project management, client communication, system analysis, design and development of web applications using PHP for online newspapers, and live election results portals for presidential and provincial elections of Sri Lanka.
APRIL 2008 OCTOBER 2007	Software Engineer Intern <i>Virtusa Corporation Pvt. Ltd, Colombo, Sri Lanka,</i> Aetna Pas Project : Was an active team member in Aetna Pas PMD team in migrating PMD tool from VB 6.0 to VB.NET. Imprima Project : Programmed extensively in SharePoint to successfully deliver the assigned modules.

PUBLICATONS

- Sanjaya Wijeratne, **Lakshika Balasuriya**, Amit Sheth, Derek Doran. EmojiNet: An Open Service and API for Emoji Sense Discovery. In 11th International AAAI Conference on Web and Social Media (ICWSM 2017). Montreal, Canada; 2017.
- **Lakshika Balasuriya**, Sanjaya Wijeratne, Derek Doran, Amit Sheth. Signals Revealing Street Gang Members on Twitter. In Workshop on Computational Approaches to Social Modeling (ChASM 2016) co-located with 8th International Conference on Social Informatics (SocInfo 2016). Bellevue, WA, USA; 2016.
- Sanjaya Wijeratne, **Lakshika Balasuriya**, Amit Sheth, Derek Doran. EmojiNet: Building a Machine Readable Sense Inventory for Emoji. In 8th International Conference on Social Informatics (SocInfo 2016). Bellevue, WA, USA; 2016.
- **Lakshika Balasuriya**, Sanjaya Wijeratne, Derek Doran, Amit Sheth. Finding Street Gang Members on Twitter. In 2016 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining (ASONAM 2016). San Francisco, CA, USA; 2016
- Sanjaya Wijeratne, **Lakshika Balasuriya**, Derek Doran, Amit Sheth. Word Embeddings to Enhance Twitter Gang Member Profile Identification. In IJCAI Workshop on Semantic Machine Learning (SML 2016). New York City, NY: CEUR-WS; 2016.
- **Balasuriya L.**, Perera K., Bandara N., Perera S., Amarasena D., Dias D. : InforMate - A GIS for Diverse Mobile Devices, eASIA 2009 conference, Sri Lanka.

PROFESSIONAL ACTIVITIES AND SERVICES

- External Reviewer : WAIM(2013), KDD(2012)

GRADUATE LEVEL COURSES (SELECTED)

- Data Mining
- Advanced Data Mining
- Machine Learning
- Information Retrieval
- Semantic Web
- Cloud Computing
- Web 3.0: Next Gen Web & Apps
- Programming Languages

PROFESSIONAL CERTIFICATIONS

- Sun Certified Programmer For The Java 2 Platform 1.4

SKILLS

Programming Languages:	JAVA
Scripting Languages:	PYTHON, PHP, JSP, XML, JAVASCRIPT, HTML
Deep/Machine Learning Tools/Packages:	WORD2VEC, SCIKIT-LEARN, WEKA
Databases:	MYSQL, MONGODB
Operating Systems:	WINDOWS AND LINUX (EXPERT)
Cloud Computing:	HADOOP/MAPREDUCE (BASIC)

REFERENCES

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