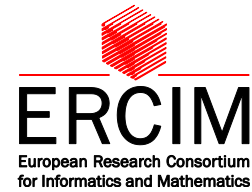




ERCIM "ALAIN BENSOUSSAN"  
FELLOWSHIP PROGRAMME



## Scientific Report

First name / Family name	<b>Mudasir Ahmad Wani</b>
Nationality	<b>Indian</b>
Name of the <i>Host Organisation</i>	<b>NTNU, Gjøvik, Norway</b>
First Name / family name of the <i>Scientific Coordinator</i>	<b>Patrick Bours</b>
Period of the fellowship	<b>01/06/2019to 31/05/2020</b>

### I – SCIENTIFIC ACTIVITY DURING YOUR FELLOWSHIP

During the fellowship period at NTNU under the supervision of prof. Patrick Bours, I was involved in several scientific tasks, including:

- Designing a classification system based on textual, profile, and emotion features to predict the gender of a user in online social networks.
- Designing a Lexical and part-of-speech (POS) based system to detect the grammar in the English language.
- Analyzing the application of several machine learning techniques and the potential of behavioral features to distinguish sexual predators and victims using the chat conversation logs.
- Optimization of the multiclass classification problem
- Analysis of social media data to design a machine learning-based system for early detection and limiting the spread of fake content across different platforms.
- Co-supervision of a master thesis entitled “Feature-based detection of fake Twitter profiles using machine learning.”

## II – PUBLICATION(S) DURING YOUR FELLOWSHIP

In this 1-year fellowship program, I have submitted several articles, two accepted publications in conferences, one manuscript for a conference, and one journal manuscript which are almost ready to be submitted and few manuscripts yet to complete.

Accepted publications:

- Mudasir Ahmad Wani, Nancy Agarwal, Patrick Bours “Emotion-based Mining for Gender Prediction in Online Social Networks” in ACM International Conference on Machine Learning and Data Science (ICMLDS-2k19).
- Nancy Agarwal, Mudasir Ahmad Wani, Patrick Bours “A Language-independent gender classifier for Online Social Networks” in IEEE International Conference on Information and Communication Technology (CICT-2k19).

Pending publications:

- Mudasir Ahmad Wani, Patrick Bours, Nancy Agarwal, Designing an online Sexual-Predator Detection System, **(Conference-will be submitted soon)**
- Mudasir Ahmad Wani, Patrick Bours, Nancy Agarwal, An insight into Binary tree SVM algorithms for Multiclass Classifications, **(conference-under process)**.
- Nancy Agarwal, Mudasir Ahmad Wani, Patrick Bours, Lex-Pos feature-based Grammar Error Detection system for the English Language, **(journal- will be submitted soon)**.

## III – ATTENDED SEMINARS, WORKHOPS, CONFERENCES

- Attended Postdoc Career Conference: Life Outside Academia at Norwegian University of Science and Technology (NTNU), August 30, 2019, Trondheim, Norway.
- Attended and presented in 5th ACM, International Conference on Machine Learning and Data Science (ICMLDS-2k19), December 31-19, 2019, Hyderabad, India
- Attended and presented online in 3<sup>rd</sup> IEEE, International Conference on Information and Communication Technology (CICT-2k19), Allahabad, India, December 6-8, 2019
- Presented a poster entitled “Machine Learning-based Mental Health Prediction System using Online Social media content” at 8<sup>th</sup> CRISE conference, November 11-12, 2019, Gjøvik, Norway
- Attended European Association for Biometrics (EAB), Norsk Biometri Forum,

2019, Oslo, Norway, November 17, 2019

- Attended Norwegian Biometrics Laboratory (NBL) Annual Workshop 2020, at NTNU, Gjøvik, Norway March on 04, 2020

Invited Talks / Lectures:

- Invited as a speaker at Norwegian Biometrics Laboratory (NBL) Annual Workshop 2020, Norway, where I delivered a lecture on Sentiment Analysis and Online Social Media
- Invited to present my research on User Behaviour in Online Social networks at Centrum Wiskunde & Informatica (CWI), Amsterdam, Netherlands, in 2019 during my research visit.
- Invited as a speaker at European Association for Biometrics (EAB), NorskBiometri Forum, 2019, Oslo, Norway for the topic Analysis of Falsified Identities in Online Social Networks
- Presented my work on Gender prediction on Facebook and Twitter social network, to master students at Norwegian University of Science and Technology 2019, Gjøvik, Norway for the

#### **IV – RESEARCH EXCHANGE PROGRAMME (REP)**

Host Institute: Centrum Wiskunde& Informatica (CWI), Amsterdam, Netherlands

Scientific Contact: Dr. ABDALLAH EL ALI (Email:Abdallah.El.Ali@cwil.nl)

During the week spent at CWI, I presented and shared my past and current research on the *Identification of mistrustful identities in Online Social Networks (OSNs)* with the people working on different research projects at the Department of Distributed and Interactive systems. I was also able to get the special inputs and feedbacks on my current work from professors, postdoctoral researchers, and Ph.D. students at the department.

I discussed several research projects around online social network analysis, machine learning, user behavioural analysis, mental health monitoring (with special focus on suicidal tendencies) using online data, emotion mining and tracking system, etc., and the possibilities for future collaborations.

Finally, as an output to short research visit, we decided to work together on the research topic/project *“Machine Learning-based Mental Health Care and Monitoring System using Online Social Media”*.

Signature:

Mudasir Ahmad Wani

Prof. Patrick Bours