

CHRIST (Deemed to be University), Bangalore
Department of Computer Science

Activity Report

General Information

Type of Activity	Seminar/Research Talk
Title of the Activity	Technical Seminar on Deep sleep: Using neural networks to screen for sleep disorders
Date/s	Jan 24,2023
Time	3-4 PM
Venue	911, Central Block, CHRIST University Central Campus
Collaboration/Sponsor (if any)	International Office, CHRIST(Deemed to be University)

Speaker/Guest/Presenter Details

Name	Professor Guy Brown
Title/Position	Head, Department of Computer Science
Organization	University of Sheffield
Title of Presentation	Machine Learning Systems for Screening Sleep Disorders

Participants' profile


Type of Participants	3MCA AI Stream Students
No. of Participants	24

Synopsis of the Activity (Description)

Highlights of the Activity	1.Design and development of low-cost, practical way of screening for sleep disorders in the home using AI
Key Takeaways	1.Introduction to real time applications of AI 2.Importance of Sleep disorder identification


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Dr. Ashok Immanuel
Head, Department of Computer Science
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Summary of the Activity	<p>This event was organised as part of a lecture series organized by the British Council. Prof. Brown from the University of Sheffield gave a talk about their research on developing machine learning systems that screen for sleep disorders by analyzing sound recorded on a smartphone.</p> <p>Sleep disorders such as severe snoring and sleep apnoea are very prevalent and can lead to serious medical problems. After the emergence of Covid-19, there is increasing pressure on respiratory medicine services and little capacity to diagnose and manage sleep disorders. There is therefore an urgent need for a low-cost, practical way of screening for sleep disorders in the home.</p> <p>In this talk Prof Brown explained his research on developing machine learning systems that screen for sleep disorders by analysing sound recorded on a smartphone. The performance of these systems is competitive with more complex and expensive methods. The talk also covered three systems of increasing complexity, which addressed snoring, sleep apnoea and “diarisation” of snore sound when there are two people sleeping in a bed; in other words, working out who snored when!</p>
Follow-up plan	Contact details were shared to have beneficial sessions again for our students as well as an opportunity for our faculty colleagues to explore collaboration opportunities with the University of Sheffield.

Report prepared by:

Name of the Organiser	Deepa V Jose
Designation/Title	International Student Cell in-charge, Department of Computer Science
Signature	

Annexure:

1. *Speaker Profile*
2. *Photos of the activity*
3. *Attendance list of participants*
4. *Poster of the Activity*
5. *Feedback*

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Dr. Ashok Immanuel
 Head, Department of Computer Science

1. Speaker Profile



Professor Guy Brown is the Department of Computer Science, Head of Department, BSc(Hons), PhD, MEd. – University of Sheffield

Professor Brown obtained a BSc (Hons) Applied Science from Sheffield City Polytechnic in 1984 and a PhD in Computer Science from the University of Sheffield in 1992. He was appointed to a lectureship in the Department of Computer Science, University of Sheffield in 1992.

He also obtained the MEd in Teaching and Learning from the University of Sheffield in 1997. He has held visiting appointments at LIMSI-CNRS (France), Ohio State University (USA), Helsinki University of Technology (Finland) and ATR (Japan).

He was appointed to a Chair of Computer Science in 2013. He is currently Head of Department.
- <https://www.sheffield.ac.uk/dcs/people/academic/guy-brown>

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2. Photos of the activity



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Results

- Bland-Altman plot shows good agreement with clinician judgment of AHI.
- Each dot shows for one night.
- 95% of estimates within agreement limits (± 1.96 SD).

CHRIST
Computer Science Dept
Research Talk By Prof. Brown
24.01.2023 15:54
12.93232, 77.60651

CHRIST
Computer Science Dept
Research Talk By Prof. Brown
24.01.2023 16:13
12.93237, 77.60649

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 Dr. Ashok Immanuel
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Department of Computer Science

Event : Research Talk By Prof. Brown

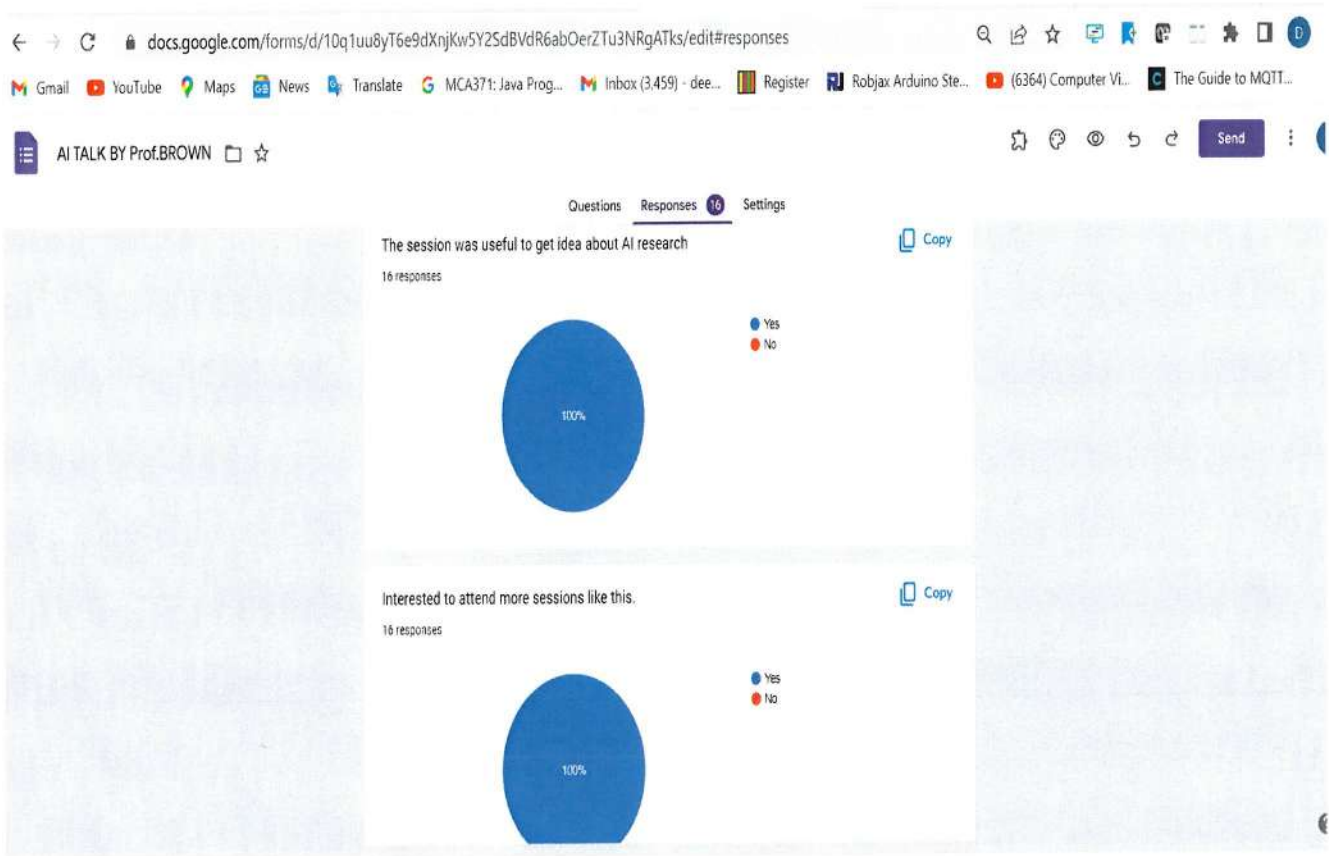
Venue: Seminar Hall, Block 2

Date: 24/01/23 Time: 3pm-4pm

Sl No	Name	Class/Section	Signature
1	Shaarang Prabhudesai	MCA A	Shaarang Prabhudesai
2	Vivek Muskan	MCA A	Vivek
3	Rahul Raj	MCA A	Rahul Raj
4	Aaryan Rajiv Varshi	MCA A	Aaryan
5	Hiran Vikraman SR	MCA A	Hiran
6	Nandini	MCA A	Nandini
7	ARUN. G.K	MCA A	Arun G.K
8	Sakthi Aishwarya.S	MCA A	Sakthi Aishwarya.S
9	Sneha Nagula	MCA A	Sneha Nagula
10	V. Dhanush	MCA A	V. Dhanush
11	MOUSUMI GIRI	MCA A	Mousumi
12	TIRTHOJOTI SINHA	MCA A	Tirtho
13	NANCY DHAWUKA	MCA A	Nancy
14	Ritika Taluja	MCA A	Ritika
15	Sridharan S	MCA A	Sridharan S
16	Samson Andrew fernandez	MCA A	Samson Andrew fernandez
17	Richie Kenneth Collin	MCA A	Richie Kenneth Collin
18	Riayona Menezes	MCA A	Riayona Menezes
19	Neil Alexander Pereira	MCA A	Neil Alexander Pereira
20	Abhay Charles Kerketta	MCA A	Abhay Kerketta
21	Sagnik Mukhopadhyay	MCA A	Sagnik Mukhopadhyay
22	Saiyan Chettri	MCA A	Saiyan
23	Arijeet Das Chowdhury	MCA-A	Arijeet
24	Deepa V Jose	Faculty	Deepa V Jose

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Feedback



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Head, Department of Computer Science



CHRIST
(DEEMED TO BE UNIVERSITY)
BANGALORE · INDIA

Department of Computer Science

in association with

Office of International Affairs

presents

A research talk

on

Machine learning systems for
screening sleep disorders



Speaker

Prof. Guy Brown
University of Sheffield



January 24th, 2023



3:00PM-4:00PM



Seminar Hall, Block 2

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