

# INDUSTRY NEWSLETTER

ISSUE NO #11 | MAY 2023

## Highlights

### Let's Chat on ChatGPT: Understanding the impact of AI



Since its launch on 30 November 2022, ChatGPT has taken the world by storm. The artificial intelligence (AI) chatbot developed by OpenAI was celebrated for its convenience and ability to understand human natural language and provide intelligent answers to complicated queries.

ChatGPT-like AI is a disruptive technology that will have profound impact on jobs and our daily lives.

As an educational institution, it is important for us to look into opportunities that AI brings us in curriculum design and mode of teaching, as well as the potential impact it has on our society.

As such, the NUS School of Computing organised a special seminar on ChatGPT to help staff, students, and the general public understand and brainstorm on this significant development in AI.

The seminar also discussed on other related AI tools such as Tome and Midjourney that leverage on the features of the ChatGPT platform to enable exciting applications.

The seminar concluded with an open floor Q&A session for those attending the event both physically and on Zoom.



### Students brought their best projects forward at the 22<sup>nd</sup> STePS

On 12 April 2023, the NUS School of Computing held the 22<sup>nd</sup> School of Computing Term Project Showcase (STePS).

Some 800 guests attended the developer centric event featuring about 60 innovative student projects across six tracks ranging from Game Development to Machine Learning. During the showcase, NUS Computing faculty, industry guests, and representatives from various government agencies cast their votes to pick the winning submissions.

Besides giving students the opportunity to showcase their talent and creativity, STePS also connected them with key industry figures and potential investors.

Congratulations to the winners of Best Project Award at STePS, we look forward to more projects next year.

Held annually at SoC, industry partners looking to collaborate or sponsor next year's STePS may reach out to:

Dr. Anand BHOJAN  
[dcsab@nus.edu.sg](mailto:dcsab@nus.edu.sg)

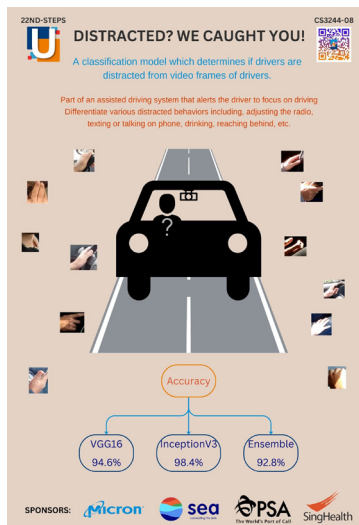


# The Winners



## Interaction Design for virtual Augmented Reality

CaptVR



## Machine Learning

Distracted? We Caught You!



## Game Development

Playtime Punchout!



### DIY ROUNDING

**Objective**  
Streamline and enhance the efficiency of some patient care tasks performed by the clinical team during rounds, which can be time-consuming, inefficient, or inconvenient.

**Pain Points**

- Difficulty manoeuvring multiple COWs
- Limited Patient Engagement
- Frequent Interruptions from Patients
- Language Barrier between Patients and Doctors
- Information Overload for Clinicians

**Our Solution**

**Patient iPad**

A portal to enhance in-patient care by empowering and educating patients and their approved caregivers about health information in order to facilitate greater patient involvement during rounding.

**Key Features:**

- Care team overview & communication
- Note-taking
- Education modules

**Enhancements to EPIC**

HIPAA-compliant platform that provides on-demand translation services 24/7, over video or audio via trained interpreters.

**VOYCE**

Conversational voice assistant used for notes dictation and helps health care providers access information more efficiently through the virtual assistant.

**NUANCE**

Zoom for Health that offers reliable, HIPAA compliant video communications between care teams, patients and their family.

**zoom**

**Doctor iPad**

A portable & convenient way for doctors to access patient information on the go, thus increasing efficiency of rounding.

**Key Features:**

- Find your patient (discharge)
- Communication system with patients & clinicians

**Vote for us!**

Team: IS4250-08

## IT-Enabled Healthcare Solutioning

DIY Rounding: Reimagining the rounding experience in hospital wards



### SMART GAS AND SMOKE DETECTION SYSTEM

**INTRODUCTION**

This project is an innovative system developed for detecting hazardous gases and smoke at domestic areas. The system integrates various IoT devices, including gas sensors and smoke detectors, and employs machine learning algorithms to detect and predict gas leaks and smoke outbreaks in real-time. This is a reliable and efficient solution to the critical issue of gas and smoke detection, thereby promoting safety and security for domestic spaces.

**HARDWARE**

The hardware involves Raspberry Pi, Red LED, MQ135 Gas Sensor, MQ5 Gas Sensor and PMS5003 Particle Concentration Sensor.

The device alerts the user about the risk of a hazardous gas/smoke by blinking the red LED. This in turn allows the user to take necessary steps for safety. MQ135 is an air quality sensor that senses gases such as ammonia, benzene, CO2 and smoke.

The Grove Gas Sensor (MQ5) detects gas leakage in home and industry and detects H2, LPG, CH4, Alcohol. Due to its high sensitivity and fast response time, measurements can be taken as soon as possible.

**TECHNICAL ASPECTS**

We have used machine learning algorithms such as Decision Tree, Random Forest and LightGBM for predicting the presence of gas/smoke.

**Sponsors:** Micron, sea, PSA, SingHealth

Vote for us here:

## AIoT Solutions and Development

Smart Gas and Smoke Detection system



### DUMB DUELS

**2 PLAYERS. 2 BUTTONS. 1 WINNER.**

POWERED BY THE ALL-NEW DUELKIT GAME FRAMEWORK.

**Sponsors:** Micron, sea, PSA, SingHealth

## Software Engineering on Modern Applications Platforms track

Dumb Duels



# Register now for Singapore Vision Day 2023!



**Date:** 24 May 2023, 9am - 5pm

25 May 2023, 9am - 12 pm

**Venue:** NUS School of Computing

COM 1 #02-06, Seminar Room 1 (SR 1)

13 Computing Drive, 117417

**Website Link:**

<https://www.comp.nus.edu.sg/~leegh/svd/>

**Registration Link:**

<https://register.comp.nus.edu.sg/SVD2023/>

NUSAIL is running the Singapore Vision Day as part of the NUS School of Computing 25th anniversary celebration.

Singapore has several strong pockets of computer vision researchers spread across the island in both academia and industry. We wish to bring everyone together with the following motivation:

## Research

Foster exchange of research ideas.

## Community

Community building, bringing together everyone who works in computer vision.

## Image

A stronger community or ensemble movement helps to cultivate Singapore's image as an AI hub for Southeast Asia.

## Recruitment

Students working in computer vision get exposure to companies that could be their future employers.

## Industrial Development

Raise awareness with companies interested in putting computer vision into their R&D plans.

## Keynote Speakers

- Prof Jiajun Wu, Stanford University: <https://jiajunwu.com/>
- Prof Vincent Sitzmann, MIT: <https://www.vincentsitzmann.com/>
- Prof Or Litany, Nvidia, Incoming Technion: <https://orlitany.github.io/>
- Prof Niloy Mitra, UCL: <http://www0.cs.ucl.ac.uk/staff/n.mitra/>
- Prof Simon Lucey, University of Adelaide: <https://www.adelaide.edu.au/directory/simon.lucey>

## Guest Speaker

- Wyn-Lyn Tan: <https://www.wynlyntan.com/>  
Topic: Generative AI Art

## Organiser

**NUSAIL:** Hosted at NUS Computing, the NUS Artificial Intelligence Laboratory (NUSAIL)'s mission is to be a centre of excellence in AI research, education, and practice, focusing on the three pillars of human-centred AI technology: embodied AI, interactive AI, and trustworthy AI. Its members include faculty, staff, and students from NUS Computing, as well as affiliated members from other faculties and organisations, both locally and internationally.

## Sponsors

Huawei International Pte. Ltd.

School of Computing, NUS



# Capstone Projects Proposal Schedule

## Master of Computing – General Track

This capstone internship provides an opportunity for students to work on solving problems beyond the formal classroom setting.

4 months individual internship with a company

Company submission period: Nov 2022 - April 2023

Internship period: May - Sept 2023

Contact: [gt-capst@comp.nus.edu.sg](mailto:gt-capst@comp.nus.edu.sg)

## Master of Science in Digital Financial Technology (MSc DFinTech)

The MSc DFinTech Capstone internship requires students to have experiential learning in academic research, translational research or software development.

4-6 months individual internship with a company

Company submission period: Nov 2022 - April 2023

Internship period: May - Sept/ Nov 2023

Contact: [aidf@nus.edu.sg](mailto:aidf@nus.edu.sg)

## Master of Science in Business Analytics (MSBA)

The industry-linked professional consulting capstone project requires students to analyse and provide solutions to today's real-world business analytics problems.

4 months individual project with a company. Work to be done in NUS

Company submission period: Jan - April 2023

Project period: May - Aug 2023

Contact: [MSBA@nus.edu.sg](mailto:MSBA@nus.edu.sg)

## Business Analytics (Undergraduate)

Students are expected to solve a real-world business analytics project proposed by a company which could include (but not limited to): data analytics, machine learning, design and development of interactive and performance dashboard, and data mining.

3 months group project with a company. Work to be done in NUS

Company submission period: June - July 2023  
Nov - Dec 2023

Project period: Aug - Nov 2023  
Jan - April 2024

Contact: [shalinda@comp.nus.edu.sg](mailto:shalinda@comp.nus.edu.sg)

## Information Systems (Undergraduate)

Students are required to develop a business information system by completing an entire Systems Development Life Cycle (SDLC) which includes gathering requirements, analysing requirements, designing the system (both software and hardware), implementing and deploying the system.

3 months group project developing software system for company. Work to be done in NUS

Company submission period: June - July 2023  
Nov - Dec 2023

Project period: Aug - Nov 2023  
Jan - April 2024

Contact: [tanwk@comp.nus.edu.sg](mailto:tanwk@comp.nus.edu.sg) (Aug-Nov term); [hsianghui@nus.edu.sg](mailto:hsianghui@nus.edu.sg) (Jan-April term)



# CONNECT WITH US



<https://iconnect.comp.nus.edu.sg>

