

# SAMUEL LEE

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## EDUCATION

2019 TO PRESENT

### BACHELOR'S IN COMPUTER SCIENCE

NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

- Current CGPA: 4.07/5.00

2014 - 2017

### DIPLOMA WITH MERIT IN BUSINESS INTELLIGENCE AND ANALYTICS

TEMASEK POLYTECHNIC, SINGAPORE

- CGPA: 3.83/4
- Director's List (Academic Year 2015/2016)
- TP-VCE Scholarship (2014-2017)

## ACADEMIC & PERSONAL PROJECTS

JANUARY 2021 – CURRENT

### CREATED A WEB APPLICATION FOR COLLEGE OF ENGINEERING STAFF TO TRACK STUDENT INFORMATION

- Utilized MySQL databases, ASP.NET and the MVC framework to create a straightforward process to access student data.
- Eased staff workload by allowing users to import excel files containing student data directly to the web application where it transfers the data to the MySQL database.
- Increased efficiency in staff where the application provides query select statements in the form of buttons to extract and view student data from the database.
- Created and taught a tutorial for students hosted by the College of Engineering to teach students on the basics of web hosting, database creation and connecting the two together.

JANUARY 2020 – MARCH 2020

### ANALYZED ELECTROENCEPHALOGRAM (EEG) DATA TO DETECT EPILEPSY

- Engineered EEG features using techniques like Fast Fourier Transform and Standard Scaling to prepare for data classification and clustering.
- Leveraged on machine learning techniques like Support Vector Machines, Decision Trees and Logistic Regression in Python to classify and recognize epileptic data.
- Implemented clustering to detect epilepsy and detailed possible ways to predict epilepsy.

AUGUST 2021 – AUGUST 2021

### CREATED AN OBJECT DETECTOR FOR IDENTIFYING DIFFERENT SYMBOLS

- Utilized Tensorflow and OpenCV to create an object detector capable of detecting 5 skin/insect bite skin conditions – Sand fly bite, Eczema, Mosquito bite, Hives, Tick bite.
- Collected and labeled images and trained the object detector from scratch using different neural network architectures eg. MobileNetV2.
- Developed a short tutorial on issues faced and some small changes to be made to Tensorflow's object detection code to allow people to have an easier/error free time creating these detectors.

## WORK EXPERIENCE

### LTA AUTONOMOUS VEHICLE PROJECT OFFICE (AVPO) | MAY 2021 – AUGUST 2021

#### ANALYTICS & RESEARCH INTERN

- Built a Tableau dashboard on the autonomous vehicle trials for monitoring and data analytics.
- Extracted important features from autonomous vehicle logs and cleaned them into structured text & csv files using python.
- Developed a teaching material for the Vocational License Department on Advanced Driver Assistance Systems.
- Revise data collection elements that are being used for autonomous vehicle progress checking & incident investigation.

### CARE CORNER PROJECT START | MAY 2019 – DEC 2020

#### PART TIME SOFTWARE AND DATABASE ENGINEER

- Eased staff workflow by automating reports and Excel summaries through VBA.
- Managed and spearheaded a data migration team to transition to a new salesforce database.
- Mapped out and planned the process of data transfer and data organization for a seamless transition.

### HITACHI ASIA LTD | JULY 2016 - FEBURARY 2017

#### RESEARCH INTERN

- Developed a CCTV video analytics application to track a given human or vehicle image.
- Developed the front-end application using Java and the backend algorithms using C++ and Python.
- Extracted and engineered image features using RGB, HSV and Edge methods.
- Performed object detection and image classification using Support Vector Machines.
- Built Haar Classifiers to perform object detection.
- Performed incremental clustering to group similar images.

## CO-CURRICULAR ACITIVIES

### JAMBAND MANAGER

#### HALL JAMBAND | AUGUST 2020 – CURRENT

- Managed band performances, planning the flow of music, dynamics and event coordination thus successfully performing at multiple live and recorded events.
- Performed as a keyboardist at multiple events.

### STUDENT AMBASSADOR

#### COLLEGE OF ENGINEERING CLUB | AUGUST 2019 – CURRENT

- Managed and ran an NTU college of engineering orientation during the COVID period, observing the safe distancing measures and running the event successfully.
- Spearheaded the planning and execution of a Dell Hackathon. Successfully managed the resources given through budgeting and assisted in the mentoring of a hackathon group.

## SKILLS AND CERTIFICATIONS

**Languages:** Proficient in English and Chinese.

**Digital skills:** C++, C#, C, Python, MATLAB, Java, Javascript, HTML, R, VBA, Qlikview, Microsoft Office, Tableau

**Certifications:** Bloomberg Junior Achievement Workplace Mentoring, SAS Predictive Modeler using SAS Enterprise Miner 13

## HOBBIES

Playing Musical Instruments (Guitar, Piano, Keyboard, Drums), Rock Climbing, Ultimate Frisbee and Cliff Diving.