

Aishik Nagar

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EDUCATION

NANYANG TECHNOLOGICAL UNIVERSITY,
SINGAPORE | 2018 – 2022

Bachelor of Engineering (Electrical and Electronics Engineering)

- **Nanyang Science and Engineering Scholar**
- Double specialization in **Data Intelligence** and **Computer Engineering**
- Minor in **Business**

THE HERITAGE SCHOOL, KOLKATA | 2016 – 2018

Indian Standard 10th (ICSE) and Indian Standard 12th (ISC)

- **All India rank 4** in Indian High board school examinations (ISC): 98.75% (**School topper**)
- Awarded '**Outstanding Student Personality**' upon graduation
- **School Vice-Captain** and Leader of the School Student Council
- **INSPIRE Scholarship** by the **Govt. Of India** for being the top 1% performer.

SELECTED PROJECTS

DementiCare

- **World Champions** in Google Developer Solutions Challenge 2021
- **15K NTU Semi Finalist**
- Built a **Dementia Caregiving App**
- Using **Azure, Flutter** and **FireBase** among other tech.

Stylize

- Used **Flask, HTML, CSS, bootstrap** and **JavaScript** to make a webapp for **image styling** and **editing**.
- Implemented **style transfer** using **transfer learning** in **Pytorch**. Also added **object detection** functionality.

Cartpole-AI

- An **AI agent** which learnt to play the CartPole game.
- Built using **Deep reinforcement learning** and **policy gradients**.

SKILLS

Data Science: Python, Tensorflow, Keras, Pytorch, Spark and Scala for Big Data, Natural Language Processing, Computer Vision

Software Engineering: HTML, CSS, Flutter, Firebase, Django, Flask, MongoDB, JavaScript, Go, SQL, PHP
Frameworks and libraries: Node.js, Express, React, Electron.js, Angular, Pandas, Numpy, Sci-kit learn, Seaborn, Matplotlib, Bootstrap

Misc: C, C++, C#, Java, Unity, Robot Operating System (ROS), Amazon Web Services (AWS), Google Cloud Platform (GCP)

EXPERIENCE

A*STAR | Research Intern

Aug 2021 – March 2022

- Working in the **I2R (Visual Intelligence)** Department for developing **3D models from 3D point clouds and images**.

SHOPEE | Data Science Intern

Jan 2021 – Aug 2021

- Used and **improved on state-of-the-art deep learning models** like yolo v5 for training and developing a custom general object detector.
- Developed a **deployment pipeline** for Shopee's general detector service for both PyTorch and Onnx frameworks. Employed **optimization** techniques which **increased efficiency by over 10 times** from the previous version.
- The detector service is live on the Shopee platform and **serving over 30 million requests per day** and set to be adopted for major features such as **Image Search**.
- Worked on **Salient Object Detection** and **Image Segmentation** using SOTA Deep Learning models like **U2Net** and **F3Net**.
- Performed **algorithmic improvements** on the model along with extensive **image processing** on training data to develop the latest Product Segmentation Service.
- Developed the **backend deployment and inference pipeline** for the service.

PANASONIC R&D CENTRE, SINGAPORE | Image Processing and 3D Intern

Jun 2020 – Dec 2020

- Worked on **perception AI** for **autonomous vehicles**.
- Used **deep learning, ROS, image processing, computer vision, python, C++** and **camera imaging theory**.
- **Researched** and **implementing SOTA AI Models** for **Face Detection, 3D+2D object detection, Parameterized t-SNE, statistical analysis** among others.
- Wrote scripts for **visualizing 3D detection results** on **2D image** and in **birds-eye view, reprojecting data** to ego-vehicle perspective, along with **integration in ROS**.
- Worked with different types of sensors like **LIDAR, pinhole, fisheye** and **GPS**.
- Worked on **data collection, processing, analysis, modelling** and **inferencing**.

INTUITION v7.0 | Chairperson

Aug 2020 – May 2021

- **Organized NTU's flagship student run hackathon**.
- **Managing Tech, Logistics, Liaison, Business** and **Finance** departments.
- Developed and maintained **INTUition v7.0 official website**.
- **Developed and deployed an avatar-based virtual platform** for the online event using **Go, Angular, Redis** and **AWS** which was **used by over 500 participants** and **sponsors** like **SAP, HP, BIGO** and **GovTech** during the event.
- **Developed and deployed an Event Registration System** with **SSO functionality** using **Angular**, and **mongo dB** and **Heroku**.

TECHNICAL DIRECTOR | IEEE NTU Student Branch

Aug 2019 – Aug 2021

- As the **Ex-co member**, organized **workshops** and **bootcamps** on topics like **Data Science**.
- Developed and Maintained the **IEEE website**.

URECA, NTU | President's Research Scholar

Aug 2019 – Jun 2020

- Worked on **hyper-parameter optimization** of **error-correcting neural networks**.

TRAINER AND DEVELOPER | Garage@EEE

Aug 2019 – Aug 2020

- Organized **workshops** and developed the **Garage@EEE website**.