Aishik Nagar

+65 96102275 | https://aishiknagar.com/ | aishiknagar@gmail.com | aishik001@e.ntu.edu.sg | www.linkedin.com/in/aishik-nagar | www.github.com/aishiknagar

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 Finalist (Global Top 10) in Google Developer Solutions Challenge**
- **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

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 **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**.

URECA, NTU| President's Research Scholar
Aug 2019 – Jun 2020

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

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** to be used by all participants 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**.

TRAINER AND DEVELOPER| Garage@EEE
Aug 2019 – Aug 2020

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