PRANNAYA GUPTA

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ABOUT ME

I am a Year 5 Student from NUS High School, currently majoring in Computer Science, Mathematics, Physics and Chemistry, with Honours in Computer Science and Computer Engineering. I am the Events-in-charge of the Computer Science Interest Group and the Club Director of the Astronomy Club.

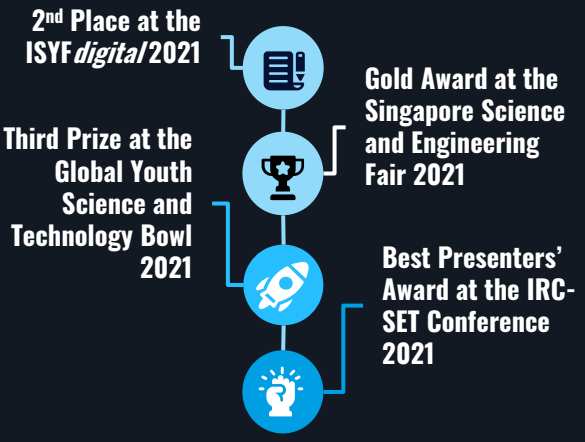
25 Projects Completed

10 Awards Received

4 Years of Coding Experience

ACHIEVEMENTS

Analysing Gait Patterns of Parkinson's Disease Patients to predict Freezing of Gait (FoG) using Machine Learning Algorithms
Used Support Vector Machines over Accelerometer Data to predict Freeze Events in Parkinson's Disease Patients



Facial-recognition AI for Communicating Emotions
Judges' Choice Award and Top 5 Rank at the BuildingBloCS AIWinpetition
Used Tensorflow to develop a CNN model to perform Visual Sentiment Analysis over Facial Expressions

Hermoor: A Social Network for Caregivers
6th Place at MindfulHacks 2021
Developed a Simplistic Android App utilizing Firebase and Google Cloud Functions for database management and detection of suicidal thoughts

Genetic Algorithms to optimize Monte Carlo Simulations
2nd Place at the SUTD Virtual Research Hackathon
Utilized Evolutionary and Julia to craft better Monte Carlo Simulations for Delivery Systems

Dionysus
3rd Place at NUSH-SUSS E-Technopreneurship Programme
Utilised the Lean Startup Methodology and presented this prototype in front of a panel of real-world investors.

PROJECTS

Embodied AI for Computational Perception and Understanding of Spatial Designs
Trained Semantic Segmentation Models via Transfer Learning capable of segmenting HDB interiors and exteriors

Noisy Student Training to identify Textual Elements in Unsupervised News Data via Argumentative Essay Pieces
Used HuggingFace Transformers to develop a system of models capable of identifying Textual Elements in Opinion Editorials and Argumentative Essays. Later Developed a user interface utilizing Vue.js for frontend and Flask for backend

Detecting and Simulating Stable Three-Body Systems
Used Python Simulations and Spectroscopic Analyses to craft accurate models for identifying Trinary Star Systems

Hermes – A Progressive App for Item Sharing
Developed a web application similar to Carousel capable of identifying and suggesting item types using TensorFlow models

Phyton Electrical Simulator
A JavaFX Desktop App capable of allowing simulating and art via the use of simple electrical components

Tracker Version 2.0
A JavaFX Desktop App using OpenCV to identify and automatically track items in videos for experimental physics projects as an improvement over the original Tracker

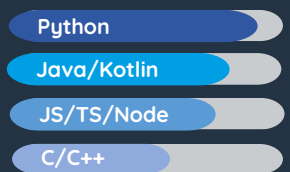
Prescript.IO
A JavaFX Desktop App that managed delivery systems for Hospitals with clients for each stakeholder

An Analysis of Global Light Pollution Standards
Utilised data from the NASA DMSP OLS Dataset to identify best locations for Astronomical Observation

Green Pass
An Android Application capable of acting as a Vaccination Travel Pass for accessibility amidst the Covid-19 Pandemic

SG Covid Prediction
Analysed different models to find an optimum prediction for the Covid-19 outbreak trajectory for Singapore

SKILLS



HOBBIES