Antara Ganapathy

antaraganapathy@gmail.com | https://github.com/AntaraGanapathy/ | https://www.linkedin.com/in/antara-ganapathy/

Summary:

Dedicated high school senior with a deep passion for tech entrepreneurship who aims to leverage tech to drive social impact.

Education:

Indus International School Bangalore: IBDP August 2022 – May 2024

- Subjects taken: Computer Science HL, Math Analysis and Approaches HL, Physics HL, Economics SL, English Lang & Lit SL, French AB Initio SL

Indus International School Bangalore: IB MYP August 2019 – May 2022

- Secured a 51/56 in the International Baccalaureate Middle Years Program (IB MYP) exam
- Subjects taken: English Lang & Lit, Hindi Capable, Extended Mathematics, Physics, Chemistry, History, Design, Economics

Experience

Budgetary, Founder & Developer January 2022 – Present

- Developed a mobile app with Flutter/Dart aimed at helping university students manage their money effectively.
- Released the beta version which included features such as expense logs, currency converter and to-do lists.
- Developed web-app with Python Flask to help instill financial discipline in children; briefly deployed with Heroku **(Github)**
- 1 of 3 highschoolers selected across India for pre-incubation program by Runway

StartupYou, Student Entrepreneur August 2020 – December 2022

- 1/42 highschoolers selected from my school for the program's first batch
- Successfully completed the beginner, intermediate and advanced programs.
- Participated in various collaborative activities such as elevator pitches and business challenges
- Honed my critical thinking, problem-solving, design thinking and communication skills

LaunchX, Student July 2023 – August 2023

- Developed understanding of various stages and tools for building a start-up such as problem identification, strategy, development, selling & growth.
- Launched a fitness platform, EZFitness, aimed at encouraging physical well-being amongst China's senior citizen population through traditional practices such as Tai Chi.
- Honed my critical thinking, problem-solving, design thinking and communication skills

Take the World Forward Fellowship, Learn with Leaders, Fellow August 2021 – February 2022

- Collaborated on two actionable projects by applying the design thinking process: (1) addressing the lack of access to quality STEM education (2) investigating sleep deprivation amongst teens
- Mentored by students from Harvard HPAIR & YLC
- Improved my collaboration, problem-solving and design thinking skills.

Futurecamp, FutureschoolAI, Fellow June 2021 – July 2021

- Learnt important AI/ML techniques such as CNN & NLP under the guidance of Dr. Rahul Dave (ex-Harvard faculty) and Dr. Raghu Meka (Associate Professor at UCLA)
- Trained a ML model with transfer learning and CNN to detect diabetic retinopathy and diagnose risk of macular edema as part of end-of-course collaborative project
- Improved my understanding of AI/ML and learnt how to implement key algorithms with Python

Research/Publications

Young Scientist Journal, Vanderbilt University (Journal Link)

- Wrote a research paper titled 'Defining Evaluative Metrics for Medical Imaging Datasets' under the guidance of a PhD student at UCL.
- Recognized the importance of defining dataset criteria, especially for medical imaging datasets, to ensure model performance.

IB Computer Science Extended Essay

- Investigating the impact of transfer learning on model performance to diagnose pneumonia
- Implemented a CNN with pre-trained models such as VGG16, ResNet50 & InceptionV3

Projects

Glaucoma Detection (Github)

- Trained a model to detect glaucoma on the 'Glaucoma Detection' Kaggle dataset
- Compared the performance of different pre-trained models: VGG, ResNet, Inception, and Xception
- 1/15 (of 200) students selected to present at the final round of the National High School Data Science Competition (NDSC), conducted by Veritas AI in partnership with the Harvard Undergraduate Open Data Project; presented findings to Harvard and Columbia graduates.

Diabetic Retinopathy Detection (Github)

- Trained a model to detect diabetic retinopathy and the risk of macular edema on the Indian Diabetic Retinopathy Image Dataset (IDRiD).
- Investigated the impact of transfer learning with different pre-trained models such as InceptionNet and VGG16 on the model trained using a CNN.

Pneumonia Detection (Medium, Github)

- Trained a model on the 'Chest X-Ray Images (Pneumonia)' dataset to diagnose pneumonia in children under the age of 5 through chest x-ray scans.
- Implemented a CNN to train the model and achieved an accuracy of 96.6%.

Fake News Detection (Medium, Github)

- Trained a model using NLP to detect fake news using the 'Fake and real news dataset'.
- Implemented techniques such as Tfidf Vectorizer and Multinomial Naive Bayes Classifier

IPCC Dataset Analysis (Github)

- Analyzed the 'Intergovernmental Panel on Climate Change (IPCC)' dataset to find key drivers of climate change
- Used Numpy, Pandas and Matplotlib Python libraries

Skills

Python (Flask + AI/ML), Flutter/Dart, HTML, CSS, JavaScript, PHP, SQL, C++

Licenses and Certifications

Divide and Conquer, Sorting and Searching, and Randomized Algorithms - Coursera Issued June 2021
Stanford Online

App Development with Flutter Issued June 2021
TechSparx

AI for Everyone - Coursera Issued April 2021
DeepLearning.AI

Computer Programming in Python and JavaScript (Intermediate) - Udemy Issued April 2021
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Web Designing (Level 1 & 2) Issued December 2020
TechSparx

Programming in Python (Level 1) Issued November 2020
TechSparx

Interactivity with JavaScript - Coursera Issued July 2020
University of Michigan

Introduction to CSS3 - Coursera Issued June 2020
University of Michigan

Introduction to HTML5 - Coursera Issued June 2020
University of Michigan

Data Collection and Processing with Python - Coursera Issued June 2020
University of Michigan

Learn to Program: The Fundamentals - Coursera Issued May 2020
University of Toronto

Honors and Awards

Young Achiever's Award (awarded for social service) 2024
Indus International School Bangalore

Blue Star Award (awarded for academic and extra-curricular achievements) 2023
Indus International School Bangalore

Young Achiever's Award 2022
Indus International School Bangalore

Blue Star Award 2022
Indus International School Bangalore

Front Runner (3rd highest hypothetical investment of $6000 in Mock Shark Tank) 2022
StartupYou

Certificate of Excellence 2021
Futureschool.AI