

Varsha Saravanabavan

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EDUCATION

Nanyang Technological University, Singapore Bachelor of Engineering (Computer Science)

Aug 2020 - Jun 2024

- Honours (Highest Distinction), Overall CGPA: 4.51/5.00
- Elective Focus: Artificial Intelligence, Data Science and Analytics
- Relevant Modules: Advanced Software Engineering, Database System Principles, Algorithm Design & Analysis, Computer Security, Cyber Threat Intelligence

University of Maryland, College Park, United States of America

Aug 2022 - Dec 2022

- Fall Semester Exchange

WORK EXPERIENCE

Thermo Fisher Scientific, Singapore Software Engineer Intern

Jan 2023 - Jun 2023

- Worked with a SCRUM team on a web application, driving enhancements to backend services and AWS database by optimising architecture of the codebase and creating new automated test cases in Java.
- Developed intuitive user interface screens using AngularJS to ensure a seamless and visually appealing user experience.
- Collaborated across borders by sharing and articulating project developments with international teams.

Maplegrove Partners, United States Software Engineer Intern

Aug 2022 - Dec 2022

- Developed an open-sourced software for domain name purchasing and DNS configuration by integrating existing NameCheap, DynaDot and CloudDNS APIs using PHP and JavaScript.
- Collaborated with executives to ensure product met all client functional requirements, demonstrating its effectiveness in enhancing client services.

PROJECTS

Final Year Project

Title: Enhancing Deepfake Detections using EfficientNet with Transformer Integrations

Aug 2023 - May 2024

- Designed a novel deep learning model using PyTorch and trained on state-of-the-art deepfake and real facial dataset to accurately detect and classify deepfake images.
- Optimised the network architectures by integrating spatial and vision transformers to achieve accuracies of 87.50% and 91.43% respectively.

Neural Networks and Deep Learning Project

Title: Age and Gender Classification using Neural Networks

Aug 2023 - Dec 2023

- Conducted an in-depth investigation on gender and age classification using traditional CNN and advanced image recognition models using PyTorch and Keras in Google Colab.
- Developed a simultaneous age and gender classification deep learning model with transfer learning techniques and obtained a best accuracy of 97.55% for gender and 67.14% for age.

Multidisciplinary Design Project

Title: Mobile Application for Autonomous Robot

Aug 2023 - Dec 2023

- Created an Android application in Java as a wireless remote controller for our robotic system via Bluetooth.
- Engineered an intuitive user interface enabling interactive control of the robot's movements, real-time status updates, and instruction transmission for predicted paths, while receiving image recognition IDs.
- Collaborated closely with Image Recognition, Algorithms, and Hardware teams to establish seamless communication protocols between modules for integration.

Software Engineering Project

Title: PathFinder Web Application

Jan 2022 - May 2022

- Developed a web application using Django hosted on Heroku to aid students by consolidating information regarding tertiary educational paths and suggesting recommended paths using their interests and achieved grades.
- Integrated multiple features such as Google Maps API, user login system, word cloud and sentiment analysis based on user reviews and comments.

CO-CURRICULAR ACTIVITIES

Handball, Nanyang Technological University

Aug 2020 - Present

Treasurer and Social Media Manager

- Participated in SUniG 2023 and Institute-Varsity-Polytechnic Games 2023 as a member of the Varsity Handball team. Achieved 1st Runners Up in SUniG 2023.

Faculty Orientation Camp, Nanyang Technological University

Jan 2021 - Aug 2021

Group Leader

- Mentored and led a small group of incoming freshmen throughout the orientation program.

SKILLS

Programming: C, C#, Python, Java, Javascript, HTML, CSS, Linux

Web development: React, AngularJS, Typescript, Node.js

Machine Learning & Data Science: PyTorch, Keras, Tensorflow, Pandas, NumPy, Scikit-learn, OpenCV, Tableau

Database & Cloud: SQL, AWS, Google Cloud

Misc: Docker, Jenkins, Git, Sprint & Scrum, Agile, VS Code, Eclipse

Languages: English, Tamil