Harshavardhan M

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EDUCATION

Degree/Certificate	Institute/Board	CGPA/Percentage	Year
B.Tech.	Amrita Vishwa Vidyapeetham, Kollam	8.43	2019 - 2023
Senior Secondary	CBSE Board	92.0%	2019
Secondary	CBSE Board	100%	2017

EXPERIENCE

- **Agrisoft Diary and Agro Producer Company Ltd.**   *Jan 2022 - April 2022*
  Full Stack Developer Intern   Kollam
  - Designed and implemented a novel ERP software pipeline. Worked on the development of two flutter applications with firebase as the backend, a REST API using express and a custom user interface to access the backend.
  - Designed and integrated a payment solution custom built for client needs.
  - Lead weekly client meetings to enable open communication and ensure smooth development of project.

- **AmritaCREATE Labs**   *June 2022 - Jan 2023*
  Deep Learning Research Intern   Amritapuri
  - An edu-tech research initiative that are funded principally by research grants.
  - Working on Sign Language Accessibility for e-Governance Services at Amrita CREATE. We use AI/ML for sign language recognition of questions, that is asked to the chatbot in FAQs across 25 UMANG services.
  - Developed a Deep Learning pipeline and successfully implemented a custom BERT model tailored to address this specific problem.
  - Created a pioneering solution by integrating heatmaps into the pretraining process of a transformer-based model.

PROJECTS

- **Not Blue Chrome Extension (Deep Learning/NLP)**   *May 2021*
  A chrome extension that monitors the search activity of a user to identify potential signs of depression.
  - Utilized a deep learning LSTM model to calculate a sentiment score for each search phrase.
  - Implemented a threshold mechanism to detect concerning levels of sentiment, triggering an email notification to the user's friends and family.
  - **Tools & technologies used**: Tensorflow, Flask, Javascript

- **Packet Sniffer (Computer Networking)**   *October 2021*
  Developed a simple packet sniffing tool using Python.
  - Implemented the tool to capture data on a raw socket and provided an interactive dashboard to display network usage and other relevant information.
  - Worked on the Flask back-end and parts of the front end.
  - **Tools & technologies used**: Python, Flask, HTML, Bootstrap, Javascript, Jquery

- **Space Invaders using Deep Q-Learning (Reinforcement Learning)**   *May 2022*
  A bot that plays the classic atari game, Space Invaders.
  - Space Invaders is a classic japanese shooting video game that was released for Atari 6000.
  - This bot was trained using a convolutional neural network as a feature extractor. It was then trained using the dueling neural network strategy.
  - **Tools & technologies used**: Python, Keras, Arcade Learning Environments

TECHNICAL SKILLS AND SPOKEN LANGUAGES

- **Programming:** Python, Java, MATLAB, R, HTML/CSS, Javascript, Dart, Bash, Kotlin
- **Tools & OS:** Visual Studio, Jupyter Notebook, Google Collab, Git, Flutter, Android Studio, Gazebo
- **Libraries/Frameworks:** Pandas, Numpy, PyTorch, Tensorflow, nodeJS
- **Languages:** English, Hindi, Malayalam

Awards and Extra Curricular Activities

- **AMFOSS**   *2019*
  Open source coding club
  - Contributed to open source repositories in the fields of Android app development and web development.
  - Actively participated in diverse club activities, including attending tech talks and hackathons.

- **Ayudh Amritapuri**   *2019-2022*
  International Non Governmental Organization
  - Volunteer for Amala Bharatam Campaign, AYUDH India, participated in clean-up drives and organized awareness drives in 7 venues with a team of 200+ in August 2019.
  - Conducted multiple webinars on "Open source software and why you should get started" for underprivileged high school graduates, helping them embark on their software journey.

- **AI at Amrita**   *2020-2022*
  Coding club for AI/ML developers
  - Worked on multiple machine learning pipelines and actively participated in numerous competitions and hackathons.
  - Conducted informative seminars on machine learning algorithms to support the learning and development of newer club members.

- **Cubers at Amrita**   *2020-2023*
  Speed cubing club for Rubik's cube enthusiasts
  - Participated in and helped organize multiple international speed cubing events recognized by the World Cube Association.
  - Developed strong collaboration skills within the team, facilitating the on-boarding of new club members.