AISHWARYA HARPALE

Email : aishwaryaharpale14@gmail.com ◇ Contact : +91 9922231531
LinkedIn : linkedin.com/in/aishwaryaharpale ◇ Github : github.com/aish-where-ya

EDUCATION

Bachelor of Engineering, Computer Engineering *August 2016 - June 2020*
- Savitribai Phule Pune University (Formerly University of Pune), Pune. CGPA : 9.04/10
- Graduation date : June 2020

WORK EXPERIENCE

Software Developer, Cakesoft Technologies *September 2020 - Present*
- Developed Web Applications using technologies like React.js, PHP, Laravel, SQL, Firebase, JQuery.
- Designed various APIs and optimized performances of various microservices. Also wrote CI/CD pipelines for deployment of Web-Apps.

Student Developer, Google Summer Of Code - LibreHealth *May 2020 - August 2020*
- Working under LibreHealth organization for Low Powered Models for Disease Detection and Classification for Radiology Images. Experimenting on models such as DenseNet, Inception, etc.
- Using quantization and pruning techniques to improve model performance in terms of latency, memory usage and power consumption and emulating it on ARM devices using Qemu emulator and Docker.

Project Intern, Persistent Systems Ltd. *June 2019 - May 2020*
- Research in the field of Explainable AI and Interpretable Machine Learning.
- Identified biases in models trained on healthcare (Breast Cancer Prediction) and financial risk assessment (Home Credit Default Risk Prediction) datasets. Used DenseNet, ResNet, VGG, for training.
- Identified inconsistencies in Explainability techniques and worked on creating self-interpretable models.

Research Assistant, Pune Institute of Computer Technology *May 2019 - December 2019*
- Research conducted on Multimodal Summarization under the sub-category of Image-based summaries.
- Implemented feature selection in images using CNNs and an attention-based transformer architecture for generating effective summaries. Worked on unified Visual-Linguistic summaries for images.
- Scraped twitter for generation of a code-mixed Hindi-English dataset of 250,000 tweets. Generated embeddings of keywords for effective representations of the language.

Project Intern, VASP Solutions *March 2019 - September 2019*
- Generated a synthetic dataset of over 5000 images for training and developed an object-detection system using Faster-RCNN for classifying and labelling symbols on machine-generated diagrams.
- Given an input image, the system labels the symbols and also gives the probability of each label. The system is now under use at the organization.

PROJECTS

Seminar - Plant Disease Detection using an IoT Device
- Developed a system in collaboration with PICT Affordable Agriculture Lab that could identify diseases in crops using images of leaves.
- Developed a custom model using CNNs and deployed this model on a Raspberry Pi device for real-time predictions. Integrated this system with Cloud to generate regular reports on an Android app.

Chest-XRay Classification and Localization
- Developed a system for classifying Chest-XRay images into 14 classes using DenseNet, Resnet and VGG. Used localization techniques to draw bounding boxes over the affected sections of images.
- Built a website using Bootstrap and deployed it on a Flask server for the user to diagnose diseases.

Book Vendor - Android app
- Developed an Android app to sell and purchase second-hand university books from students.
- Included various features like user authentication, payment module and texting module.
- App was integrated with Firebase cloud services.

PUBLICATIONS

A Review of Deep Learning Models for Computer Vision
- Presented at PuneCon 2018 : IEEE International Conference on Data Science and Analytics in December 2018. Paper published in IEEE Xplore Digital Library.
- Explores various deep learning models, their architecture, advantages and disadvantages. The paper proposes the specific areas of usage of various models based on their individual characteristics.

TECHNICAL STRENGTHS

Languages	C, C++, Java, Python, HTML, Javascript
Databases	MySQL, MongoDB, SQLite
Machine Learning	Tensorflow, Keras, OpenCV, Tensorboard
Web Technologies	CSS, React.js, JQuery, Boostrap, PHP, Laravel
Cloud Services	ThingSpeak, Firebase
Other Technologies	Docker, Flask, CUDA, Git, CI/CD

ACADEMIC ACHIEVEMENTS

MindSpark PredictX Finalist, 2019.
Ranked 2nd in the 1st round of a national Data Science Challenge among more than 200 participants.
ACM India Celebration of Women in Computing Scholar, 2018.
Represented my student chapter at a national level summit for women in computing.
First Class with Distinction
Awarded for three years of undergraduate studies.

CO-CURRICULAR ACTIVITIES

Workshop Head - PICT ACM Student Chapter
Teaching Assistant - Google Developer Students' Club
Teaching Assistant - PICT ACM Student Chapter
Technical Head - PICT ACM Student Chapter(W)
Class Representative - Pune Institute of Computer Technology
Member - Association for Computing Machinery, Google Developer's Group - Pune and PyData - Pune.