Anirudh Kaushik

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SUMMARY

Computer Science graduate student with more than 2.5 years of experience in Android app development. I have also designed several machine learning systems aimed at solving a myriad of problems. Currently seeking internship opportunities in summer 2022.

EDUCATION

M.S. Computer Science   Expected Jan 2023
Arizona State University, Tempe, AZ, USA   **4.0 GPA**

B.E Computer Science   June 2018
Birla Institute of Technology, Mesra , India   **7.32 / 10.0 GPA**

PROFESSIONAL EXPERIENCE

Samsung Research Institute, Noida, India
Software Engineer   **09/2018 - 04/2021**

- Restructured Samsung Video Player and Samsung Gallery apps for multiple Android operating systems by incorporating the MVVM design architecture in Java.
- Developed background downloading feature for Cloud content in the Video Player app.
- Overhauled the User Interface for Samsung Video Player app according to the latest 'Samsung One UI design' for Android P OS and Q OS and wrote unit test cases using the mockito framework.
- Upgraded GIF player by programming auto GIF play and stop feature in the Gallery app for Samsung Watch running on Android Wear OS.
- Led a team of 4 members for the development of an internal tool 'Automated App Tester' in Python using the Appium driver, which reduced the average time spent on 'Sanity Checks' by 50%.
- Mentored interns in the training of Java and Android fundamentals.

Centre For Artificial Intelligence & Robotics, DRDO, Bengaluru, India
Research Trainee   **05/2018 - 06/2018**

- Conducted research on 'Real time object detection and segmentation' as a machine learning research trainee.
- Evaluated the efficiency of Blitznet architecture for object detection and segmentation in low resolution drone images and analyzed the time vs accuracy tradeoff for various CNN feature extractors.
- Remodeled the Blitznet architecture by replacing the Resnet-50 CNN feature extractor with Inception Resnet v2 by programming in Python and utilizing the Tensorflow library.
- Improved the accuracy for object detection and segmentation in the low resolution drone image dataset by 4%

PROJECTS

Full stack Photography Blog, *Personal Project*   Fall 2021
- Developed a full stack app where a user can upload and delete photos with short descriptions by utilizing MongoDB, Express Js, Node Js, React Js and Redux.
- Deployed the app to Heroku and Netlify.

Efficient Workers for Distributed Machine Learning, *Class Project*   Spring 2021
- ● Implemented sparsification and quantization techniques in distributed machine learning models (LeNet and VGG-11 architectures) in Python and Tensorflow library.
- ● Reduced the communication cost among the distributed workers from 148 MB to 1.48 MB in VGG-11 and from 6.56 MB to 0.06 MB in LeNet.

Privacy Preserving K-means Clustering, *Class Project*   Spring 2021
- ● Modeled a privacy preserving K-means clustering system for 2 party computation in Python by utilizing Pytorch and Facebook's secure computation library Crypten**.**
- ● Restructured the mathematical operations used in model training to make them secure with the help of the Oblivious Transfer protocol, which guarantees the preservation of the privacy of individual datasets.

Voice Based Emotion Classifier, *Personal Project*   Fall 2018
- ● Designed a neural network classifier in Python by utilizing Keras and Sklearn libraries, which segregates the voice samples into 8 different types of emotions.
- ● Achieved an accuracy of 88% by extracting sound characteristics from the voice samples such as MFCC's and Chomogram and utilizing them as the feature vector for the classifier.

TECHNICAL SKILLS

Programming Languages: Java, Python, Javascript, C/C++
Front-End: HTML, CSS, XML, React Js
Frameworks, Databases, tools and OS: Android, SQLite, MongoDB, Node Js, Express Js, Git, Linux/Unix, Tensorflow, Scikit, Numpy, Pandas, Appium, Retrofit, Android Jetpack, Mockito

Awards

Samsung Research Institute, Noida, India
- ● Recognized as the best new joinee to the Multimedia division for the year 2018 and was conferred 'Samsung Spot Award' for successfully redesigning the Samsung video player app's User Interface.

EXTRACURRICULAR EXPERIENCE

National Service Scheme (NSS), India   08/2014 - 08/2016
- ● Volunteered to conduct local village cleanliness drives. Collected roadside trash and installed new garbage disposal bins.