SAUBAN MUSADDIQ

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EDUCATION

MS, Computer Science   Aug 2019 – (Expected)May 2021
Arizona State University, Tempe, AZ   3.44/4 GPA
Coursework: *Data Intensive Systems for ML, Statistical ML, Topics in NLP, AI, Image Processing and Analysis.*

Bachelor of Engineering, Computer Science and Engineering   May 2017
PES Institute of Technology, Bangalore, India   8.66/10 GPA
Coursework: *Big Data, Applied Machine Learning, Advanced Algorithms, Natural Language Processing, Software Engineering.*

TECHNICAL SKILLS

Data Science: PyTorch, TensorFlow, Keras, MATLAB, NumPy, Pandas, Scikit-learn, Spark
Programming: Python, Ruby, JavaScript, C, C++, Java
Web Development: Ruby on Rails, AngularJS, JQuery, HTML, CSS
Misc.: MYSQL, Git, Unix Shell, MS Excel, Docker

SELECTED PROJECTS

Paraphrase Identification on PAWS dataset.   Spring 2020
- Developed an NLP model to identify paraphrases, on a dataset containing sentence pairs with high lexical overlap.
- Achieved an accuracy of 92% using a BERT based model. Explored alternate models like a KNN based model and a BERT sentence embedding model that matched the performance with the BERT Model.

Tools and Technology: *PyTorch, NLP, BERT, KNN, Transformers.*

Automated Cardiac Risk Stratification.   Fall 2019
- Automated the Carotid Intima Media Thickness (CIMT) measurement to stratify the risk of Cardiovascular diseases.
- Adapted an Active contour model variant called as Dual Snakes to delineate the Intima Media layers.

Tools and Technology: *MATLAB, Image Processing, Active Contour Models, U-Net.*

Facial Photo-Realistic Image Synthesis from Sketch.   Summer 2020
- Successfully generated photo realistic images from pencil sketches using Fixed-point GAN (Generative Adversarial Network), compared the performance with GAN variants, Cycle GAN and StarGAN.
- FP GAN generates facial images that have dramatically reduced artifacts compared to other generative models.

Tools and Technology: *PyTorch, Generative Models, GAN, CycleGAN, StarGAN, OpenCV.*

Decentralized Emotion Detection Model using Federated Learning.   Spring 2020
- Adapted federated learning architecture for an Emotion detection model to run in decentralized edge devices.
- The Distributed model trains on user data locally in the edge devices while preserving the user's privacy.

Tools and Technology: *PyTorch, PySyft, Distributed ML, CNN, Transfer Learning, Federated Learning.*

PROFESSIONAL EXPERIENCE

Infibeam Avenues, Bangalore, India: Software Developer   5/2017 – 6/2019
- Developer for buildabazaar.com, a SaaS platform to create personalized Ecommerce websites. The Platform hosts over 30,000 stores, with each website sharing a single codebase.
- Worked as a Full Stack Dev with exposure to end to end product development, from design to testing to deployment.
- Development and integration of core modules and plugins to the platform including integration of services like Payment Gateways, E-Commerce analytics tools and modules like Layout Editor, Product Carousels to the Platform.
- Large scale restructuring of codebase to better fit industry standards like optimizing page speed (Google Page Speed).
- Implemented Quality and Cost Based Selection (QCBS) and other modules for products and services in the public procurement bidding system of Indian Government's E-Commerce Marketplace (GeM) platform.

Tools and Technology: *Ruby on Rails, AngularJS, Javascript, Git, MYSQL, Docker, Unix Shell, OO Design.*

Infibeam Avenues, Bangalore, India: Software Consultant (Remote)   7/2019 – 8/2019
- Entrusted with consultancy work after leaving the SDE job for graduate studies. Coordinated with the technical support team remotely to develop and integrate client specific plugins for the E-Commerce sites in buildabazaar.com.

Infibeam Avenues, Bangalore, India: Software Developer Intern   1/2017 – 4/2017
- Built a platform to automate the creation of hybrid mobile apps (that work across platforms behaving like native apps) for E-commerce stores using ionic framework. Created a web interface for creating and editing the apps.