

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, Natural Language Processing, AI, Image Processing and Analysis.*

Bachelor of Engineering, Computer Science and Engineering

May 2017

PES Institute of Technology, Bangalore, India

8.66/10 GPA

TECHNICAL SKILLS

Data Science: PyTorch, TensorFlow, Keras, MATLAB, NumPy, Pandas, Scikit-learn

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 new Modules and Plugins to the Platform. E.g.: 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 bidding system of Indian Government's E-Commerce Marketplace (GeM) platform.

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

Infibeam Avenues, Bangalore, India: Software Consultant

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 (work across platforms behaving like native app) for online stores using which, users can carve out personalized hybrid apps for all the major mobile operating systems.