

Ramit Pahwa

Linkedin Github Website

Email : ramit@utexas.edu

Mobile : +1-737-864-5989

EDUCATION

- **University of Texas at Austin** Austin, TX
Masters in Computer Science
Research Assistant in L.I.V.E Lab, advised by Prof. Alan Bovik working on Video Quality Assessment. Aug 2022 - Dec 2023 (expected)
- **Indian Institute of Technology, Kharagpur** Kharagpur, India
Integrated MS, BS in Mathematics and Computing; GPA: 9.0/10.0 (Salutatorian) Aug 2014 - May 2019

EXPERIENCE

- **Adobe** India
Software Engineer(ML) August 2019 - June 2022
 - **Acrobat Android:** JavaScript support for PDF internal PDF rendering engine. Worked on enabling PDF editing functionality to mobile devices (Android, iOS) porting legacy C++ library to work on mobile devices.
 - **ML in Acrobat Android:**
 - Worked on Liquid Mode, proprietary deep learning model responsible in building a streaming pipeline for server based inference, also worked on aspects of reducing the model size, making the model run on device for Android.
 - Worked on using **Text-to-Speech model** to enable PDF dictation functionality in Acrobat Android.
 - **Neural Topic Modelling, using LDA and Word Embedding** to generate tags for the PDF.
 - **MDM/MAM:** Led design and development of a library which was used in Acrobat, Scan Android to make the application MDM/MAM Compliant, this work was selected to be presented at **Tech Summit 2022** and I was awarded Impact Award.
 - **Performance Improvement:** Designed and developed a monitoring service which profiles android application in terms of frozen and slow frames and reports abnormality. Baseline profiling and reusing it to improve App performance.
 - **Independent Research:** Developed a prototype for question answering BERT model on PDF's which worked entirely on device, this culminated into a Patent '**AutoQA: Auto-creation of Custom NLP models using Neural Architecture Searching using Knowledge distillation**' submitted to USPTO.
- **Adobe Research** BEL Lab, India
Research Intern - Dr. Sunav Choudhary, Prof. Jayanta Mukhopadhyaya May 2018 - April 2019
 - **Knowledge Distillation:** Proposed and developed a system for compressing state of art CNN without loss of performance using **Reinforcement Learning**.
 - **Paper:** '*Data-Driven Compression of Convolutional Neural Networks*'
 - **Master Thesis:** Adobe went on to sponsor my Master's Thesis, where I worked Distilling knowledge from RNN networks to CNN, which are more efficient at inference time.
 - **Thesis:** '*Model Blending for Text Classification*'
- **University of Alberta** Edmonton, Canada
Research Scholar, Guide : Prof. Dana Cobzaz May 2017 - July 2017
 - **Object Detection:** Implemented a Faster R-CNN model for Localization of Femoral Head in Ultrasound Images.
 - **Segmentation:** Implemented a U-net for segmentation on high dimensional ultrasound data.
 - **Pipeline:** Proposed and implemented an end to end training regime involving localization and segmentation.
- **Myntra** Bangalore
Research Intern, Manager : Mr. Vishnu Makkapati May 2016 - July 2016
 - **Deep Learning:** Implemented Triplet and Siamese network to search for similarity among images for search.

PUBLICATION

- **Lstms with attention for aggression detection.**[Code] [Paper] Santa Fe, New-Mexico, USA
Nishant Nikhil, Ramit Pahwa et al. TRAC, Coling 2018
- **Data-Driven Compression of Convolutional Neural Networks.** [Code] [Paper]
Ramit et al. ACM Manuscript

PROJECTS/ POSITION OF RESPONSIBILITY

- **Karna:** Started Deep Learning group at university, which led to publication in leading publications and workshops
- **Re-colorize:** Automated tool to re-colorize grey-scale image and videos.[Code] [Demo]
- **Advance Numerical Techniques:** Implementation of PDE solvers using Numerical Techniques [Code] [Report]

PROGRAMMING SKILLS

- **Machine Learning:** Pytorch, Tensorflow, Keras, Caffe, scikit learn
- **Languages:** Python, Java, C++, SQL, \LaTeX , HTML, CSS
- **Technologies:** AWS, React, Dash, Flask, OpenCV, Github, Git, Android