Chandan Reddy Akiti

MS in Computer Science & Engineering

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Education

MS in Computer Science & Engineering - Pennsylvania State Univerisity Aug 2019 - May 2021 (expected)
GPA : 3.74/4.0 ; **Courses** : Deep Learning, Computer Vision II, Topics in NLP, Large-Scale ML, Distributed Systems*, Algorithm Analysis

B.Tech in Computer Science & Engineering - Indian Institute of Technology (IIT), Madras Jul 2011 - May 2015

Skills

Programming	Python, C++, JavaScript, Go, Bash
Machine Learning	PyTorch, TensorFlow, Keras, Scikit-learn
Systems	Node.js, Redis, Apache Thrift, Google V8, Kafka, Zookeeper, Cassandra, MongoDB, SQL
AWS	Elastic Beanstalk, CloudFormation, S3, Auto Scaling, Elasticsearch

Experience

Pennsylvania State University, PA — Graduate Research Assistant

Goal-Oriented Information Extraction in Spoken Dialogue Systems | Advisor : Prof. Anna Squicciarini Jan 2020 - Present

- Developed a novel method[1] to extract **frame-semantics** related to information disclosure in **conversation** system.
- Trained **semi-supervised adversarial** model ensembles for Reddit text classification.

Natural Language Processing | Deep Learning | Information Extraction | PyTorch

Samsung R&D Institute Delhi, India — Software Development Engineer

Lead Engineer | Healthcare AI (Research) | Vision Intelligence Team Apr 2018 - Jul 2019

- Developed remote health monitoring algorithms for Samsung Robot using *Computer Vision*, *Signal Processing*.
- **Visual PPG** : Developed a novel algorithm for **heart signal estimation** using **temporal tracking of skin-clusters** in face video.
- Implemented **classification** models for arrhythmia detection using Visual PPG data collected from 250 subjects.

Healthcare | Artificial Intelligence | Computer Vision | Machine Learning | Classification | Signal Processing | Python

Software Engineer | Fashion Recognition | Vision Intelligence Team Jun 2017 - Mar 2018

- Developed a **live fashion recommendation** system for E-commerce application in Samsung Smart TV.
- Trained **Faster R-CNN** with contrastive loss for recognizing clothing of 11 classes with a **45% recall @ top-5** retrieval.
- Implemented a "Street Image to In-Shop" **clothing retrieval** deep learning framework.
- Integrated the clothing retrieval framework to Samsung TV Content Recognition system deployed on AWS.

Object Recognition | Object Retrieval | Computer Vision | Deep Learning | TensorFlow

Software Engineer | Automated Content Recognition (ACR) | Data Intelligence Team Jul 2015 - May 2017

- Developed a dashboard monitoring system for ACR Infra using **Node.js** and NGINX API.
- Optimized the **Kafka-Cassandra pipeline** and **ElaticSearch** query templates to reduce latency by **25x**.
- Obtained a **reduction of over 40%** in the total ACR network traffic by implementing **Redis** caching module.
- *Awarded Best Employee of the Month for facilitating rapid deployment using* **AWS CloudFormation** *in US region.*

Backend Development | Distributed Systems | Amazon Web Services | Infra Monitoring | Node.js | C++ | JavaScript

Academic Projects

Object Tracking with Capsule Networks | RAT-Tracker Jan 2020 - Apr 2020

Studied the effect of capsule networks on **object tracking** of different motion classes using the GOT-10K dataset. Modified SiamFC object tracker with additional layers of capsule networks. Observed **improvements** in Illumination Variation, Background Clutters, Low Resolution and Motion Blur classes.

Robust Semantic Role Labeling | Robust-SRL Jan 2020 - Apr 2020

Trained a distributionally robust model for Semantic Role Labeling task in Natural Language Processing. Obtained **better** performance on **low-represented domains** while keeping the overall performance same.

Sequence Image Captioning Jan 2020 - Apr 2020

Implemented and trained sequence image captioning using **hybrid network** of GLAC and VSRN. Applied **Graph Convolutional Networks** on image sequences in story to visualize affinity between regions.

Publications

1. Chandan Akiti, Anna Squicciarini, and Sarah Rajtmajer. A Semantics-based Approach to Disclosure Classification in User-Generated Online Content. *Accepted* to Findings of 2020 Conference on Empirical Methods in Natural Language Processing*. EMNLP
2. Chandan Akiti, Sarah Rajtmajer, and Anna Squicciarini. Contextual Representation of Self-Disclosure and Supportiveness in Short Text. In *Proceedings of the AAAI-20 Workshop on Affective Content Analysis*, New York, USA, 2020. AAAI

* indicates ongoing/pending