ANUBHAV SACHAN

Electronics and Communication Engineering
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TECHNICAL EXPERIENCE

Saarthi.ai
Deep Learning Intern, Language Technology
April – June 2020 | Bengaluru, Karnataka

- Developed a *Model-based Offline Multi-Agent Dialogue Policy Learning* technique using deep reinforcement learning and incorporation of Actor Critic framework to improve the performance of the dialogue manager for their Conversational AI product.
- Implemented and focused on few-shot unsupervised dialogue generation to understand the interpretability of latent action space for insights in the improvement in representation learning methods.

Indian Institute of Technology Indore
Summer Intern, Pattern Recognition in Biometrics
May – July 2019 | Indore, Madhya Pradesh

- Developed a deep learning based *Fingerprint Recognition System* using the multitask deep convolutional neural network architecture to extract fixed length representational features from a high resolution fingerprint image.
- Developed an augmented deep learning neural architecture to achieve domain adaptation trained using Adam's optimising algorithm in the fingerprint recognition system using the gradient reversal layer.

PROJECTS

Model-based Offline Multi-Agent Dialogue Policy Learning
Reinforcement Learning, Language Technology
May – June 2020 | Saarthi.ai

- The implemented learning paradigm relentlessly focuses on user agent to learn along with the system agent in a joint/shared fashion with the incorporation of the actor critic framework for the optimization of the model-based offline learned dialogue policy.

Few-shot Unsupervised Discrete Sentence Representation Learning based Dialogue Generation
Language Technology, Deep Learning (using PyTorch)
April – May 2020 | Saarthi.ai

- An discrete sentence representation learning method is devised and implemented to enhance the performance of dialogue manager enjoying flexibility of its integration with any existing encoder-decoder dialogue model, for an interpretable response generation in a few-shot fashion.

Fingerprint Recognition System with Unsupervised Deep Domain Adaptation
Pattern Recognition, Deep Learning (using PyTorch framework)
May – July 2019 | IIT Indore

- A customized deep learning based fingerprint recognition system has been developed using the multitask deep convolutional neural network architecture to extract the fixed length representation from a high resolution fingerprint image.
- The concept of domain adaptation in the absence of labelled training data for a deep learning architecture (DeepResPore) was implemented by augmenting the given deep neural network with the proposed new gradient reversal layer.

The Bing Scraper
Python Packaging, Web Scraping, Python 3
July 2018 | NIT Silchar

- Python3 package uploaded on The Python Package Index for the extraction of content on Bing using the concept of HTML Parsing.

EDUCATION

National Institute of Technology Silchar
Bachelor of Technology, Electronics and Communication Engineering
Current: Final Year
Expected: June 2021 | Silchar, Assam

Puranchandra Vidyaniketan
Intermediate (with Computer Science),
Central Board of Secondary Education
May 2016 | Kanpur, Uttar Pradesh

Puranchandra Vidyaniketan
Matriculation,
Central Board of Secondary Education
May 2014 | Kanpur, Uttar Pradesh

SKILLS & INTERESTS

Programming:
• Python 3.6 (PyTorch, Flask, PyPI) and familiar with C++, and C.

Machine Learning:
• Natural Language Processing in Conversational AI.
• Pattern Recognition in Biometrics.
• Deep Learning, with PyTorch Framework.

Utilities:
• SQL • Git VCS • AWS • Bash • LaTeX
• Web Development (HTML5, CSS3, JS)
• Adobe Photoshop and Lightroom

Interests:
• Reinforcement Learning • Neural Networks • Advanced Pattern Recognition • Sentiment Analysis • Data Analytics • Advanced Algorithms

ACHIEVEMENTS

- Winner, Hackathon, NIT Conclave 2019, held at NIT Rourkela
- National Level Finalist, Smart India Hackathon (Software Edition) 2019, organized by Ministry of Human Resource Development, Government of India, held at NIT Warangal
- Intel Edge AI Scholarship Awardee, 2020
- Recipient of Prime Minister Scholarship Scheme with AIR 729, 2018
- Google India Challenge Scholarship: Android Basics in 2018
- State level Qualified, National Talent Search Examination (NTSE)