LINCY PATTANAIK

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RESEARCH INTERESTS

Information Extraction & Retrieval, Information Systems, Natural Language Processing, Program Synthesis

EDUCATION

International Institute of Information Technology, Hyderabad
Bachelor of Technology (B.Tech) August 2014 - April 2018
Electronics and Communication Engineering (ECE)

RESEARCH EXPERIENCE

Microsoft Research Nov 2020 - Present
Role: Research Fellow

- Working on text extraction from heterogeneous data which is robust to changing document templates (extension of HDEF, PLDI 2019)
- Combination of techniques from program synthesis (PROSE) and machine learning communities

Traffic Signal and Sign Detection for Autonomous Driving Jan 2017 - Dec 2017
Supervisor: Prof. K. Madhava Krishna, B.Tech Project

- Designed a system to detect, track, and localize traffic signs and signals
- Used pixel wise semantic segmentation on top of CNN

WORK EXPERIENCE

Microsoft India Development Center June 2018 - Oct 2020
Role: Data Scientist

- Bing's local experience:
  - Boosted precision of query classifier by 40% by adding clustering based signals from index data
- Microsoft enterprise search in Bing:
  - Added new probabilistic query understanding models for acronym feature in enterprise search
  - Designed clicked history based pipeline for user specific suggestion.
  - Scaled enterprise suggestion promotion model to non-English markets

  Web vs Enterprise Autosuggest

PROJECTS

Shape-Preserving Half-Projective Warps for image stitching Feb 2018 - April 2018
Prof. Anoop M. Namboodiri, Course project

- Implemented a novel parametric warp, a spatial combination of a projective transformation and a similarity transformation. By this, the field of view could be extended by stitching images with less projective distortion

Image Segmentation using Watershed Transform Aug 2017 - Nov 2017
Prof. Avinash Sharma, Course project

- Implemented a modified watershed algorithm using adaptive thresholding and adaptive masking techniques

Model to predict flight performance Aug 2016 - Nov 2016

Prof. Avinash Sharma, Course project

- Implemented models to predict flight on-time performance, whether it was delayed or not using flight arrival and departure data
- Used machine learning techniques like SVM, random forests and neural networks

RELEVANT COURSES

Machine Learning	**Programming**	**Mathematics**
Intro to AI	Algorithms & OS	Linear Algebra
Information Retrieval	Computer Programming	Discrete Mathematics
Digital Image Processing	Data Structures	Probability and Random Processes
Computer Vision	Computer System Organisation	

TECHNICAL SKILLS

Programming Languages:	C/C++, C#, Python, MySQL
Frameworks & Libraries:	ScikitLearn, TensorFlow, Keras, Caffe, OpenCV, PROSE
BigData:	Azure Cosmos DB

TEACHING EXPERIENCE

IMA304 - Linear Algebra Jan 2018 - April 2018

- Made assignments and graded

IMA303 - Differential Equations Aug 2017 - Nov 2017

- Made assignments and graded

ECE339 - ECE Lab Jan 2017 - April 2017

- Conducted lab sessions and taught simulations on MATLAB